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## ORIGINAL ARTICLES.

### THE TREATMENT OF THE INDIGESTION OF STARCHY FOODS.[1]


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THE proper treatment of this form of indigestion takes into consideration its causation. As has been said at another place,[2] the prophylaxis comprises the limitation of the starches ingested, insists upon thorough mastication, which results in complete insalivation, because in this way is the output of saliva increased, and the taking of starchy foods in as dry a condition as is possible. By giving careful attention to these conditions, a very considerable number of instances of the indigestion of starchy foods can be relieved. This is the extent to which the treatment of so-called buccal dyspepsia can go in the way of prevention.

The treatment of the indigestion of starchy foods must take into consideration the acidity of the stomach contents, the amount and character of the pancreatic fluid, the influence of intestinal micro-organisms, the deficient or exaggerated peristalsis, and the absorption of the converted starch.

Too great acidity of the gastric contents is unfavorable to starch conversion, because: first, it limits the time during which the ptyalin from the salivary glands acts in the stomach, at best but half an hour, or abolishes it altogether; secondly, the outpouring of an excessively acid fluid from the stomach into the duodenum delays and markedly interferes with the re-establishment of starch conversion by the action of the amylopsin of the pancreatic fluid. In these cases the testing of the stomach contents gives a ready solution to the problem, and the neutralization of the excess of acid by sodium bicarbonate in dose from five to a hundred grains, in time varying from immediately to two hours after eating, will rectify this error. Recent papers have shown the harmlessness of even the long-continued use of large doses of this drug; and, further than this, the favor in which this remedy is held by many practitioners is due, not so much to its beneficial effect upon gastric, as to its secondary action upon intestinal digestion. In these cases not only must the proper dose be ascertained for each individual, but the time for its administration is equally important. The methods for ascertaining the motility of the stomach have been so frequently of late the subject of study by clinicians that it is not necessary for me to discuss them at this point. In passing, it is worthy of remark that the action of sodium bicarbonate is solely in neutralization of the free hydrochloric acid in the stomach, the important cause of interference with starch conversion; but it is probably without effect on the acids in organic combination.

Of disturbances of the motor functions, constipation is the rule in imperfect starch conversion. The best method of overcoming this is the administration of a saline in conjunction with an alkali, the latter assisting in the process of conversion. Further than this, as both Wöhler and Miahle have pointed out, the administration of salines will diminish the urinary acidity and quite likely also increase the normal alkalinity of the intestinal contents. The saline, which I have used by preference, is sodium phosphate (the normal, not the acid phosphate) in from 40 to 120-grain doses, to be taken in a full glass of hot water on rising in the morning. To this dose is added 15 to 40 grains of sodium bicarbonate. The advantage which the phosphate possesses over the sulphate is that it is distinctly less disagreeable in taste. As an alternative to these drugs I have used cascara sagrada in various preparations, in sufficient dose to secure a full movement, but I am not satisfied that its action is so beneficial. If gastric acidity is high, then we must in addition administer large doses of sodium bicarbonate during, or immediately after, each meal. Haidenhain has shown that alkalies facilitate pancreatic digestion, and this is the probable explanation.

Diarrhea is by no means common. It is generally due either to obstinate constipation, and alternates with it, or to abnormal activity of the micro-organisms. In the first case, as a rule, hard masses are found in the stools; in the second, the passages are watery, containing mucus and are of

[1] Read before the Section on General Medicine of the New York Academy of Medicine, February 18, 1896.

[2] MEDICAL NEWS, Vol. LXVIII, p. 182.

bad odor. If the diarrhea is due to the irritation produced by hardened masses, thorough purgation by the official compound carthartic pill followed by the sodium phosphate mixture is sufficient. If it is due to fermentation, a preliminary purgation with castor oil should be followed by the use of intestinal antiseptics. In either case no opium nor any of its alkaloids should be administered, for these only give temporary relief and lay the foundations for a worse condition than previously existed. The so-called intestinal astringents are equally useless. When the fermentation is marked, the expulsion of gas and pain are prominent symptoms. The treatment for the associated diarrhea is given above. In addition intestinal antiseptics should be continually administered. Since the commencement of my studies in 1884, I have made use of a large number of drugs, and their various disadvantages have been determined by clinical observation. Following Bouchard, we can say that naphthol has the best bacteriological basis for its therapeutic use. On the other hand, it is locally irritant, and it also increases the chlorine and generally the hydrochloric acid of the stomach, thus interfering with starchy digestion. Bismuth salicylate is not open to these objections, but unless the kidneys are healthy, this, as well as the other salicylates, is contra-indicated. Another disadvantage is, that this decomposes in the stomach, setting free the salicylic acid. Further, as Gley has shown, unless the pancreatic fluid and bile are discharged in sufficient amount into the duodenum so that distinct alkalinity is secured, the breaking up of such compounds as salol does not take place, and thus the salicylates may be useless. Salol presents another objection from the carbolic acid which it contains. I have used bismuth naphtholate with much satisfaction in these cases; it is not irritant and certainly limits the amount of gas formed, the offensiveness of the discharges, and decreases pain when caused by intestinal distention of gas. The dose varies from ten to twenty grains two hours after eating, administered as a powder or in gelatin capsules. Benzoyl-guaiacol has been used in a few instances, but not with the same success. The importance of intestinal antisepsis does not alone lie in the prevention of gas-formation, diarrhea, and pain, but also in the prevention of auto-intoxication from ptomaine absorption. By these means also the remote effects of systemic poisoning, the fecal anemia of Clark, neuralgia, vertigo, and the mental symptoms are obviated, and the results of the action of the micro-organisms of proteids resulting in indol, phenol, and skatol, and other aromatic bodies are minimized. The proper method of dealing with flatulence accompanied by pain is outlined above. For impatient individuals, while we are evacuating the offending material and establishing antisepsis of the digestive tract, a plan for affording speedy relief, and one which will not interfere with the action of the drugs in use, must be adopted. This is the administration of the concentrated tincture of avena sativa in a wineglassful of hot water every half hour until the pain is subdued.

The absorption of converted starch takes place rapidly enough if peristalsis is normal and mucus is not present in inordinate quantity. The latter is reduced in amount by the use of the sodium phosphate mixture in the manner directed.

The changes in character and amount of the pancreatic fluid have been the cause of various therapeutic expedients, and in obviating the results of these variations, physicians have found many apparently useful resources. At the outset pancreatin should be considered. The preparations, as found in the market, are often inert and, even if not, its action is destroyed in the stomach by contact with the acid gastric juice. To prevent this loss of action, Unna used pills coated with keratin. With this method of administration there is some question if these pills will not pass entirely through the intestinal tract with undissolved coating. It has been proposed to coat these pills with fused salol. The same objection applies to this practice as to the use of this drug for the establishment of intestinal antisepsis. The cases when it is most needed are those of deficient flow of pancreatic juice and diminished alkalinity of the contents of the duodenum, and so the salol would likely prove to be an impervious coating. Probably the best coating is an alcoholic solution of shellac, containing a sufficient quantity of balsam of tolu to impart a proper degree of elasticity, so that cracking of the coating during its drying is obviated; this was the suggestion of Flint. The use of pancreatin then appears to be rather in the preparation of predigested foods than administered as a drug.

Diastase, the maltine of Irwine (1785), Dubrunfault (1823–30), Payen, and of Persoz, has been the subject of much study. As made by Payen and Persoz, it is capable of dissolving, in several hours, fifteen to eighteen hundred times its weight of cooked starch. This as other diastases loses its property of converting starch in the presence of acid, but the degree of acidity requisite is less than the usual gastric acidity. Although its

action is favored by alkalies and alkaline salts yet the caustic alkaline solutions destroy it. As Hayem points out its action is best between 95° F. and 104° F., and the analogy between the vegetable and animal diastase (ptyalin) appears to be complete. The use of diastase from malt was insisted upon by Couteret (1870) who claimed to obtain great benefit from its use. In cases of gastric hyperacidity, when the action of the ptyalin is supended in the stomach and when that of the pancreatic fluid is lessened or prevented, the use of vegetable diastase administered with an alkali (sodium bicarbonate) gave good results. This practise was also sanctioned by Boas. For this purpose the following method of preparation has been employed: Three ounces, *i.e.*, three heaping tablespoonfuls of crushed malt, is well mixed with a half pint of cold water in a jug and allowed to stand from ten to twelve hours. The supernatant fluid was then poured off and strained through two or three folds of muslin until the filtrate becomes clear and bright. The yield is about six ounces. The disadvantages of this preparation were found in the necessity of its being freshly prepared. To preserve it, a few drops of chloroform were added to a tightly corked bottle of the liquid. When required for use it should be emptied into a saucer and left in a warm place, when, after two or three hours, the chloroform would be entirely evaporated. A liquid preparation of diastase, which is permanent, has been found in the shops for several years. It seems to possess but little amylolytic activity, due probably to the contained alcohol. The use of malt extracts in the treatment of amylaceous dyspepsia has yielded some very good results, but we are limited to the solid extracts. The liquid extracts generally contain so much alcohol and acids, the results of fermentation, that the action of the diastase is inhibited. At the same time, however, the feeble diastatic power of even the best of them, generally about five times their weight of dry starch, the large amount of inert substances, their deterioration with age, and the fermentation which the large amount of sugar (maltose) which they contain may give rise to, are all disad antages. Further, the pharmaceutical difficulties in the way of using them in mixtures, are obstacles, but not insurmountable ones, to their use in elegant pharmacy. Some years ago (1891) I noted that a malt extract containing diastase in large percentage had been made by Jokichi Takamine, the Japanese chemist, but I have been unable to find pure diastase of value in the market until during the past year. My skepticism in regard to the value of diastase in the form of a dry powder was based upon the low starchy converting power of a foreign preparation. When I found that a diastase had been isolated by Takamine, and its value certified to by Lascar, I again experimented with the substance. This preparation, according to Smith and Tonkin, is made as follows: Bran of ordinary wheat is sterilized by heat so as to destroy any and all germs which it may contain. After cooling it is mixed with the Japanese fungus, the *eurotium oryzæ*, known as *taka-moashi*, in such proportions as experience shows to be most favorable for the development of the diastatic fungus, *taka-koji*. This mixture is kept at the same temperature during the whole of the forty hours it takes the fungus to attain its full development. The *taka-koji* is then washed in cold water, after which the pure diastase contained in the latter is precipitated in the form of a tasteless, odorless, and nearly white powder. Experiments have shown that this diastase possesses the remarkable power of, within ten minutes, converting into sugar one hundred times its weight of starch (estimated in the form of a dry paste), and, within three hours, fifteen hundred times its weight of starch. Its activity is increased by raising the temperature up to 131° F., but no higher. This action is more marked in neutral or feebly alkaline solutions, but is entirely absent in acid or strongly alkaline media. Even when the conditions are in the highest degree favorable the action of the diastase ceases when a certain amount of sugar has been formed. On placing the solutions in a dialyzer, so as to remove the sugar as fast as it was formed, it was found that the action of the ferment more closely resembles the process taking place in the organism, and that a much larger percentage of sugar was obtained than without it.

Lascar has found that he can convert with this diastase one hundred to one hundred and fifty times its weight of starch into a soluble state. Under proper conditions this first named amount is so thoroughly converted in four minutes that neither the iodin test nor the microscope can detect unconverted starch. The starch employed in most of his experiments was carefully washed arrowroot. The final result is, to a great extent, maltose. In this connection especial mention should be made that an undue employment of heat will destroy the action of diastase. The powder, as found in the market, appears to be permanent, and is used in doses of from one to five grains, as a powder or in gelatin capsules, during or after the meal. Since there is a possi-

bility of the activity of this drug being impaired in its passage through the stomach, although Thompson believes that vegetable diastase continues to operate in acid media, it may be administered as a pill, coated with an alcoholic solution of shellac, keratin, or salol, but the objections noted above will hold here as well. This method, however, I have found to be necessary.

The following cases, which are briefly reported, illustrate the classes in which we may reasonably hope to derive benefit from the administration of this drug:

I.—July 2, 1895, H. E., aged fifty-six years, dry-goods merchant, has suffered for years with dyspepsia. The attacks occur chiefly during his busy season, when hasty luncheons and irregular hours are the rule. On ascending the stairs the dyspnea is so severe that speech is impossible. The eyes are yellowish, dull headaches occur almost daily, and one to three nights each week. The heart is irregular, both in force and rhythm, there is much hepatic tenderness, and the abdomen is resistant and painful on pressure which gives rise to gurgling. Ten grains of calomel with twenty grains of sodium bicarbonate gave several copious, foul-smelling motions. A pill composed of podophyllin one-quarter grain, iridin one-half grain, and enonymin one grain, was ordered for each night. Bismuth naphtholate, five grains with taka-diastase, three grains in powder was given after each meal. 19th. The passages being softer and no longer foul-smelling, the bismuth is now omitted. The sleep and palpitation are much improved. August 9th. The improvement continues, and although cardiac irregularity persists, he is not sensible that his heart is abnormal. September 19th. All medication is now withdrawn, excepting the diastase which the patient is positive is also unnecessary. October 5th. On accidentally meeting the patient he announces that he is feeling in excellent condition, having taking no medicine for the past week. This patient might be classified as a buccal dyspeptic.

II.—July 27th, R. C., aged forty years, a merchant attending to a large enterprise, besides representing his organization in attempt to influence legislation, has been a pronounced lithemic for several years. He has been under the care of several physicians, who have generally pronounced him to be *brightique* and have prescribed a vegetable diet. He complains of various neuralgic pains, languor, disinclination to exertion, irritability of temper, constipation and flatulence. The cardiac first sound is booming, the second accentuated. The urine of sp. gr. 1018, without albumin, sugar, or casts, contains much calcium oxalate and broken-down epithelium. He is directed to make use of a mixed diet, avoiding, however, potatoes, drink one to three pints of an alkaline water between meals, daily, and to take outdoor exercise, short of fatigue. In addition he is to receive taka-diastase in two-grain doses with one grain of citrated caffein after each meal. August 10th. The patient reports but little change save that the constipation and flatulence are better. September 22d. The temper and capacity for work are much improved, and the work is done with less exertion. October 30th. The urine is now of sp. gr. 1022, with nothing abnormal excepting some calcium oxalate. December 9th. The patient reports great improvement over his condition six months ago and feels that he can dispense with medicine.

III.—July 30th, V. E., aged fifty-six, army officer, has been troubled for several months with morning nausea, constipation, distention of the stomach and bowels, more marked two or three hours after eating. There was dyspnea on exertion at all times, but after meals this became more marked, and with it was noticed palpitation. The patient was fleshy, a large eater, and was accustomed to the regular use of whisky in considerable amount, but never to the extent of inebriation. Physical examination revealed an irregular and intermittent pulse, a shortened, high-pitched and metallic first sound of the heart, an accentuated pulmonic second sound, a small liver, the area of flatulence being still more diminished because of the tympanitic percussion note which extended over the entire abdomen; the urine contained a trace of albumin and bile. The diagnosis was, fatty heart, cirrhotic liver, and duodenal indigestion. The patient was directed to limit his starchy foods, bread, potatoes, puddings, and diminish the amount of whisky, and at the same time dilute it. The sodium phosphate mixture was ordered for the morning, a pill of strychnin, one-twentieth grain and nitroglycerin, one-hundreth grain, to be taken thrice daily and immediately after eating, taka-diastase five grains in gelatin capsules. August 10th. The patient reports that the flatulence had markedly diminished, and with it the palpitation and dyspnea after meals; the constipation was lessened. The conditions, as found on physical examination, are as before, excepting that the abdominal distention and tympanitic percussion were not so marked. September 12th. The improvement has continued as regards the digestion, although the cardiac symptoms are but little better. October 1st. The constipation is so far relieved that the sodium phosphate can be omitted. The cardiac dyspnea is marked, and insomnia has become a prominent symptom. Beer is now used to the exclusion of whisky. 14th. Albumin has increased in the urine, and the cardiac symptoms are more severe, although the patient has a better appetite and does not complain of indigestion. The diastase is now reduced to two grains per dose. 25th. No dyspeptic symptoms are elicited upon questioning, therefore the diastase is omitted. November 16th. The circulatory disturbances are increasing, necessitating frequent

changes in treatment. About two weeks after this report the patient died quite suddenly. This patient suffered from incurable diseases of heart and liver, yet the betterment of his dyspeptic symptoms was too pronounced to be attributed solely to change in diet or to other medication.

IV.—August 20th, W. L., aged forty, lawyer, consulted me to be relieved of excessive flatulence, accompanied by constipation, which had existed for four weeks. He stated that he was a rapid eater, fond of bread and pastry, but of good habits. Physical examination revealed nothing but a sensitive and tympanitic abdomen. He was thin, nervous, and energetic. The urine showed an excess of alkaline phosphates. The sodium phosphate mixture was given, and five grains of taka-diastase in capsules with meals. Besides, the food was to be eaten slowly, masticated thoroughly, and the fluids at meals limited to twelve ounces. September 24th. The patient has been in the country since his first report, and states that he is greatly improved, but that at times only is he annoyed by flatulence. Sodium phosphate is to be omitted. October 17th. The symptoms are now entirely relieved, the urine is normal, and the diastase is omitted. This patient suffered from buccal dyspepsia, and a portion of the relief, at least, was brought about by regulating his habits of eating.

V.—August 3d, H. S., aged forty-four, builder, three days ago, while bathing, suffered from cardiac pain, oppression, and vertigo. For some months he had noticed abdominal pains after meals, flatulence, and dyspnea. At times his vertigo was so severe that he was unable to go about unfinished buildings. The patient was very stout, but his color was good. He was a hearty eater, and was much of his time in the open air. Beyond a rapid and slightly irregular heart-beat, nothing was found. The abdomen was fleshy, yet gave tympanitic resonance in the epigastric region. The liver was distinctly felt below the ribs. The patient's habits as regards large amounts of beer were corrected, and he was given taka-diastase in six-grain doses in capsules. 10th. The patient returns, complaining that the capsules gave rise to great irritation of the stomach, with nausea, and followed by vomiting. The dose was diminished to four grains and given in powder form. One-sixth of a grain of mercurous iodide (yellow) was given each night, and a half glass of Villacabras water in the morning. September 14th. The vertigo, flatulence, and breathlessness are improved. October 27th. The iodide and mineral water can now be omitted. The diastase is to be diminished to three grains during a continuance of the improvement. December 14th. The patient experiences so excellent health that all medication is omitted.

The foregoing cases, with a number of others, have been under observation a sufficient length of time for arriving at a fair conclusion as to the value of the remedy. In but two instances have been noted any markedly unpleasant results from the administration of diastase. One is recorded above; the other was of a young man who came to me suffering from acute intestinal indigestion from dietary indiscretion, whose symptoms were apparently unchanged, excepting increased nausea, after the administration of the remedy.

Nor am I certain as to the proper dosage; it is possible that one or two grains may be amply sufficient; on the other hand, I know of no reason why the maximum dose (six grains) as given above, may not be exceeded with safety. Theoretically that amount should be ample. Personally, I have come to prefer its administration in the form of a powder, and in that form it seems to retain its properties. All important is the diagnosis, that it shall be exact. Accessory means for the relief of by-symptoms should not be negiected.

We may fairly conclude that taka-diastase is useful:

1. In many cases in which the symptoms were wrongly attributed to proteid indigestion.

2. In the vast majority of cases as a substitute for the inefficient pancreatic extracts, malt mixtures and various combinations hitherto employed.

3. For the same relief of amylaceous dyspepsia, which, in the case of proteid indigestion, is obtained by acids and pepsin.

4. As a successful method by which the patients can preserve their nutrition upon a mixed diet.

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## TARSAL DEFORMITIES IN CONGENITAL TALIPES EQUINO-VARUS.

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The various forms of congenital club-foot may be thus classified for convenience of study:

| | | |
|---|---|---|
| Simple | Lateral . . | Varus. / Valgus. |
| | Antero-posterior | Equinus. / Calcaneus. |
| Compound | Equinus . . | Varus. / Valgus. |
| | Calcaneus . . | Varus. / Valgus. |
| Other forms | Cavus. | |
| | Planus. | |
| | Non-deforming (Shaffer). | |
| | Neurememesis. | |

As the non-congenital forms are not to be con-

sidered in this paper, they will be dismissed with the simple mention of their grand divisions: simple acquired, paralytic, and traumatic.

The proportion of cases of club-foot to all births is 1 to 806. Talipes equino-varus is by far the most frequent—three-fourths of all cases occur in both feet oftener than in one, the right oftener than the left, and is almost twice as frequent in males as females.

The etiology is wrapped in obscurity, its elucidation depending upon the data furnished by comparative physiology, pre-natal disease, and embryological research. In this there is found a vast field for theoretical speculation. The cause has been variously estimated under the heads of maternal impressions, of which no case has been reported; and heredity, which has undoubted influence, but is not generally traceable except in marriage of blood relatives. Statistics show one in 164 of the latter, against one in 1903 births from other marriages.

The chief theories are: (1) that of mechanical or intra-uterine pressure; (2) that of pre-natal disease or the musculo-nervous theory, and (3) the arrest of development or osseous theory. All of these have fallen into the background to give place to the fourth of non- or retarded rotation, which is the latest. It is based upon embryological research and offers the best explanation yet advanced, being demonstrable, feasible, and scientific. It was first proposed by Berg, of New York,[1] announced independently by Parker and Shattuck,[2] confirmed by Schudder,[3] and is favored by Bradford and Lovett, Roberts, Ketch, Young, and others.

In his experiments Berg observed the position of the lower extremities at different periods of fetal life, and found that from their position (crossed and flexed) that all intra-uterine pressure was brought to bear directly upon the outer border of the leg and dorsum of the foot, causing the position of equino-varus, which he believes to be a stage in the normal development of every fetus. Its permanence is obviated by nature providing an inward rotation of the extremity, carrying the leg away from the abdomen of the fetus, placing the feet against the utering walls in extreme flexion, and the force of intra-uterine pressure directly upon them. The correction of this early varus depends upon the completeness of internal rotation, and upon its failure or incompleteness depends the deformity.

[1] *Archives of Medicine*, December 1, 1882.
[2] *British Medical Journal*, 1886, Vol. II, p. 10.
[3] Boylston Prize Essay, *British Medical and Surgical Journal*, October 27, 1887.

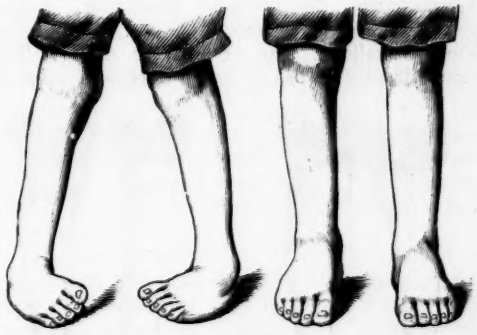
There is marked alteration in all the structures except the muscles, which at birth are almost always healthy, but soon atrophy from disuse. The deformity is a displacement inward of the anterior part of the foot; the displacement occurring at the medio-tarsal articulation and accompanied by alteration in form and position of the astragalus and os calcis. The scaphoid is not altered in form, but is drawn upward, inward, and backward by the tibialis posticus, the tibialis anticus and the extensor proprius pollicis muscles articulating with the inner side of the head of the astragalus, and may, in severe cases, articulate with the tip of the internal malleolus. A separate synovial sac has been found in this locality by Bradford and Lovett. The astragalus is rotated on its antero-posterior axis, tilted downward and forward, the tibia only articulating with the posterior part of its superior facet; while the anterior portion of this surface becomes prominent on the dorsum of the foot. The head and neck are turned obliquely inward and closely resemble the os calcis of apes, as described by Parker. "The normal angle, formed by a line drawn parallel with its external border and the sagittal axis of the body, amounts at birth to an average of 38 degrees, and in the adult healthy foot 26⅙ degrees. In congenital equino-varus it varies from 64 to 31, the average being 49.5 degrees. Owing to this obliquity the articular head is directed antero-laterally and has two facets instead of one, the larger of which articulates with the displaced scaphoid."[4]

The complex nature of the deformity, coupled with its frequent occurrence, renders at once apparent the necessity for an universal treatment, or, in other words, a treatment that is within the reach of not alone the orthopedic surgeons but the general practitioners as well. In the treatment of congenital club-foot there is no established rule, for the method the surgeon best knows is apt to give him the best result. Early in 1893, Dr. Gibney, surgeon-in-chief to the Hospital for Ruptured and Crippled, New York, called the attention of the hospital staff to the Wolff method of using plaster-of-Paris, and at his suggestion the treatment was carried out. The attention of the profession was first called to the Wolff method in a paper read before the Association of American Physicians in Berlin by Dr. Freiberg, of Cincinnati, and published in the MEDICAL NEWS October 29, 1892. Wolff first anesthetizes his patient, except in very young children, and in slight degrees of club-foot, and then by manual

[4] Young.

force brings the foot into as nearly the proper position as is possible without using undue force, and while it is held in this corrected position by an assistant, strips of rubber adhesive plasters are applied spirally around the foot, extending well above the ankle. This is done to aid in holding the foot in the corrected position until plaster-of-Paris is applied. As used in the cases here reported the treatment has differed from that first practised only in the omission of the anesthetic. As no attempt was made in these cases to reduce the deformity at the first sitting, no anesthetic or adhesive plaster was necessary. There is no difficulty experienced, even with the most ordinary assistance in applying the dressing, after which the patient remains undisturbed for twenty-four hours, when *redressment* can be commenced safely. Pain is most marked in the beginning of treatment, and for this reason only a little of the deformity should be corrected at the first two or three sittings. It is best at all stages of treatment to regulate the amount of twisting by the pain produced. In applying the dressing, first place a piece of double-faced canton-flannel along both the outer and inner borders of the foot extending over the malleoli. This offers protection to the bony prominences, which is especially required over the metatarso-phalangeal joint of the great toe and over the cuboid bone. Now two thicknesses of single-faced canton-flannel bandage are snugly applied to the foot and leg, extending to and including the tuberosity of the tibia. The plaster is now applied, extending quite as high as the bandage, thus grasping the tibial tuberosity, it prevents rotation which allows of effectual *redressment*. To avoid pain and swelling the toes should be kept in their normal relation to each other, only their tips should be exposed. The amount of plaster used is governed by the size of the member, usually one and one-half or two ordinary bandages will suffice, and should be applied in the usual manner. Now by grasping the leg in one hand and holding it firmly on the table the plantar surface is made flat by firm pressure with a small board in the other. This corrects some of the deformity and furnishes an even surface on which the child can walk. Real treatment, as before stated, is begun twenty-four hours after applying the dressing, as above indicated; first by cutting out a wedge-shaped piece of the plaster over the most prominent part of the deformity, the angles of this opening being united by a linear cut through the remaining plaster. In making this section, care should be taken not to pass so near the heel as to permit it slipping when the foot is twisted. But little force is now required to oppose the edges of the wedge-shaped opening in the plaster and effectually overcome a part of the deformity. The foot is held in this new position by an assistant while another bandage is applied by filling the space on the inner side of the foot with folds of the bandage, and carrying the whole by a figure of 8 around the foot and ankle. This holds the foot firm until the next treatment, when it is easily peeled off from the primary dressing which was dry when the stay bandage was applied. The succeeding treatments are done by simply enlarging the wedge-shaped incision and applying a new stay bandage. After three or four stretchings it will be found necessary to apply an entirely new dressing. When excoriations occur, and they are liable to be the result of pinching the skin, it is necessary to discontinue the treatment for some time, as excoriations from this cause are very difficult to heal. Continue the treatment until the foot is in the position of over-correction and then encase it in a silicate of soda dressing strengthened by a piece of light steel passing from the ball of the foot above the heel. Over this a shoe is worn. Wolff continues this dressing for six months.

CASE I.—Norman M., aged 4½ years. Double equino-varus. Stands on outer border of left foot, with 45 degrees of inversion; right about 25 degress of inversion. July 15th, has Achillotomy, plantar fasciotomy, and twisting with Thomas' wrench of both feet. August 26th, has 35 degrees inversion of right and 15 or 20 degrees of left foot. Wolff method commenced. September 9th, deformity of right foot corrected at four



CASE I.

BEFORE. AFTER.

sittings. September 15th, deformity of left at at eight sittings (see photograph before and after treatment).

CASE II.—Robert C., aged nine years. Right talipes varo-equinus marked pes cavus. March 17th, Achillotomy, fasciotomy, and twisting with Thomas' wrench. April 24th, foot partially cor-

rected 30 degrees; cavus remaining. July 20th, after six weeks' *redressment*, practised bi-weekly, varus is corrected; cavus still present. Treatment discontinued six weeks on account of an excoriation. September 25th, cavus corrected.

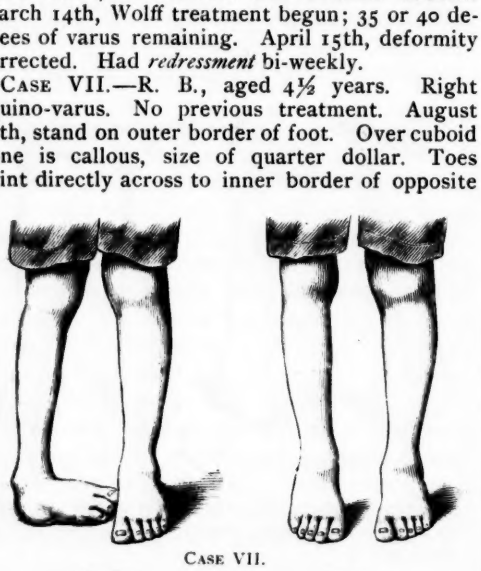
CASE III.—W. C., aged eight years. Left equino-varus. Had Phelps' operation in Bellevue in 1891. September 10, 1892, stands with external border of foot on floor, in extreme inversion. March 24, 1893, has had ether five times since admission. The foot twisted with Thomas' wrench and plaster applied each time; 25 degrees of varus still present. Wolff treatment commenced to-day. May 15th, has had *redressment* once a week for past seven weeks. Varus entirely overcome.

CASE IV.—Chas. B., aged eight years. Double equino-varus. Left foot has 35 degrees of varus; right 45 degrees. March 21st, etherized; left Achillotomy, plantar fasciotomy, and twisted with Thomas' wrench. Right foot has Wolff method commenced. April 10th, left foot again twisted with Thomas' wrench and put in plaster. April 20th, both feet over-corrected. Right foot has had Wolff method bi-weekly.

CASE V.—W. S., aged six years. Left equino-varus 45 degrees inversion. March 25th, Wolff method commenced. June 1st, deformity entirely overcome. Has had *redressment* bi-weekly. Discharged from hospital with foot in plaster and silicate of soda case.

CASE VI.—Louis S., aged eight years. Left equino-varus. November 8, 1892, astragalus removed. January 10 and February 20, 1893, under ether; foot twisted with Thomas' wrench. March 14th, Wolff treatment begun; 35 or 40 degrees of varus remaining. April 15th, deformity corrected. Had *redressment* bi-weekly.

CASE VII.—R. B., aged 4½ years. Right equino-varus. No previous treatment. August 30th, stand on outer border of foot. Over cuboid bone is callous, size of quarter dollar. Toes point directly across to inner border of opposite

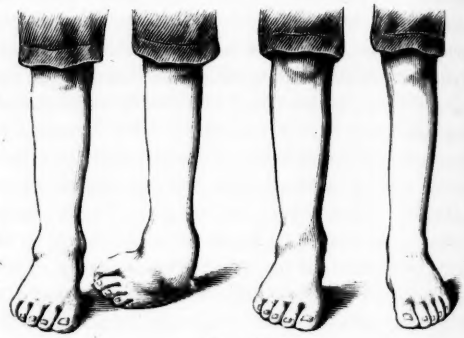


CASE VII.

BEFORE. AFTER.

foot. Wolff treatment commenced. October 1st, inversion of foot corrected; had *redressment* tri-weekly; thirteen sittings (see photograph).

CASE VIII.—A. T., aged nine years. Left equino-varus. Has had no treatment. Stands on outer border with foot turned to right angle at medio-tarsal joint. September 13th, Wolff



CASE VIII.

BEFORE. AFTER.

treatment commenced. October 17th, deformity corrected. *Redressment* tri-weekly for past four weeks (see photograph).

CASE IX.—D. P., aged 8½ years. Double equino-varus. Had double Achillotomy when three years old. June 13th, walks on outer border of the feet; toes pointing across to opposite foot; feet are inverted to right angle; has astragalotomy and Phelps' operation on left foot; right foot has Achillotomy, fasciotomy, and twisting with Thomas' wrench. August 9th, 45 degrees inversion of each foot. Wolff treatment commenced on right foot. September 20th, deformity of right foot corrected; eight sittings. October 15th, deformity of left foot corrected in eight sittings.

CASE X.—Geo. H., aged twelve years. Talipes equino-varus. Had tendo-Achillis divided when two years old without benefit. November 4th, stands on outer border of foot; weight on cuboid bone, where there is a very large callous, the size of silver dollar; right angle deformity at medio-tarsal joint. April 21st, deformity entirely overcome; weekly *redressment* since admission.

The treatment of these cases necessitated a great amount of patient labor, but one should, I think, feel amply repaid for his trouble when such results can be reached without, in some cases, using either anesthetic or knife; consequently no risk of an operation. The tendency to rapid recurrence in these deformities when left unprotected strengthens the importance of over-correction, and this cannot be too strongly urged. Therefore convert the equino-varus into a calcaneo-valgus and hold it there until this new position becomes permanent. There is no better way of doing this than by the means here advised and its cheapness and efficiency are points which commend it to the profession.

## HYPERTROPHIC CIRRHOSIS WITH JAUNDICE.[1]

BY JOSEPH EICHBERG, M.D.,
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THE subject which I offer for your deliberation to-night is one of considerable interest to the clinician and pathologist; an interest heightened by the yet debated question of the right of this disease to a name, or to any consideration as an independent affection. For there are those who assert that there is no such thing as hypertrophic cirrhosis, *per se*, and that the clinical and *post-mortem* determination of an enlarged and hardened liver by no means justifies any distinction between this and the common variety of atrophic cirrhosis, of which it is to be regarded as an early stage. Against this view I hope to offer some evidence convincing to me, however it may impress the audience—evidence furnished in part by the liver itself; in part by the brief history of a case; in part by an examination of the literature on the subject.

Originally described as a separate nosologic entity by Todd, it is mainly to the labors of the French school that we owe our recognition of the distinctive clinical and pathologic features of this affection. Charcot and Gombault, Hanot, Tissier, Dieulafoy, Jaccoud and Cornil, with many others who have contributed less prominently, are permanently identified with the graphic, one might almost say classic, descriptions of the disease. In Germany the acceptance of the doctrine of its independent character has found slow progress, and even now the principal opposition to this view is found in the writings of German teachers. In England a number of cases have been reported; comparatively few, however, in this country. On this account and because of a recent opportunity to examine the body of a patient dying from hypertrophic cirrhosis, it has seemed proper to again call attention to the subject.

The history of the case is about as follows:

The patient, a young woman in her twentieth year, of good physical development, and correct habits, noticed, about two years preceding her death, slight jaundice. Accompanying this were the usual gastric disturbances, loss of appetite, anorexia, and weakness, as well as cutaneous itching. The patient continued her work, being employed in a mercantile office, but suffered pretty constantly from the jaundice, which would grow more or less intense, from time to time, without apparent cause. Some time after the onset of the jaundice there occurred severe attacks of epistaxis, in the course of which the loss of blood became very great; so that the anemia added another element to the exhaustion of the patient. There was another rally and then pain and heaviness began to be felt in the right side. Finally came fever, typhoid in character, continuous, with tolerably high range; intense jaundice, the skin assuming that olive green color described by the French as grave icterus; the urine becoming brownish-black, depositing an abundant sediment of urates upon standing, the stools being frequent and of rather darker color than normal; only at rare intervals was a lighter color observed. Both liver and spleen were greatly enlarged. The border of the liver could be easily felt through the relaxed abdominal wall, some three inches below the costal margin in the mammary line. Its upper boundary, determined by physical examination, was found at the lower margin of the fifth rib. The surface of the organ was smooth on palpation, the enlargement apparently uniform, so that the proper relation between right and left lobes was maintained, the edges being sharp and clearly defined, without nodosities or irregularity. The spleen was enlarged to about twice its normal size.

Toward the end, curious nervous symptoms developed. There was aphasia, with partial recovery; slight hemiplegia, delirium, stupor, coma, and death, four days after the sudden aphasia.

A complete autopsy was not permitted, the examination being restricted to the abdominal cavity. The liver, greatly enlarged and of a very dark olive color,[1] projected below the margin of the ribs. Its surface, smooth in appearance at the first view, was found to be slightly uneven, there being a number of minute projections, rather spherical in character.

The enlargement seemed to be uniformly distributed, and the enlarged liver retained its regular outline and proportions. It was very firm to the touch, but was cut without difficulty, though the resistance to the knife was greater than would be encountered in normal liver tissue. The gall-bladder contained an unusual quantity of dark bile, more limpid than normal. Upon opening the duodenum and pressing upon the gall bladder, the biliary passages were found to be free from all obstruction, the bile emerging readily from the papilla of Vater.

The cut surface of the liver was smooth, and presented the same greenish-black hue that had been remarked at the surface. There was no mottling, no variety of color. The tissue throughout presented the same appearance. The spleen was firm, its capsule slightly thickened. The parenchyma was dark in color, dry upon section. A pocket of enlarged lymphatics, slightly red in color, was found behind the portal fissure. Upon microscopic examination the structure of the glands was apparently unaltered.

[1] Read before the Cincinnati Academy of Medicine, October 13, 1895.

[1] Even after hardening in alcohol the liver retained this greenish color, making it look as though it had received preliminary treatment with a chromium solution.

The chief interest centered in the microscopic examination of the enlarged liver. A diagnosis of hypertrophic cirrhosis had been made *ante-mortem*, and the sections presented to-night testify to its correctness. A very full and accurate description of the so-called biliary hypertrophic cirrhosis is given by Hanot and Schachmann, appended to the history of a typical case of the disease observed in the service of Professor Proust. The microscopic details might have been taken from the sections presented for your inspection.

Upon examining the sections with a low power, the most striking and evident change is the enormous increase of the connective tissue. In all directions bands of this new-formed texture traverse the field, now surrounding the lobules entirely, now dipping into the substance of the lobule, to terminate in a roundish, bulbous extremity, like the head of a serpent, as Hanot has it, or sending single filaments across the periphery of the lobule, by which one or two cells are cut off from the rest, to undergo ultimate extinction, an intra-acinous distribution.

With the low power, too, another fact is strongly brought out, namely, the integrity of the secreting structures of the gland proper, of the liver cells. It will rarely happen in a section of perfectly normal liver tissue, taken from a subject dying of disease unconnected with hepatic changes, that the liver cells will be found so little impregnated with fat, so homogenous in their protoplasm, and with nuclei so clearly defined. It is this striking immunity of the liver cells, more perhaps than some of the other details presently to be described, which is specially characteristic of biliary hypertrophic cirrhosis. We shall see that there may be increase of connective tissue from other causes; but in all such instances it will be found that this increase goes hand in hand with degenerative changes of some sort in the liver cells.

Under the low power, the relation of the vessels and ducts can also be seen to be materially changed. The larger trunks of the portal circle, imbedded in the connective tissue separating the lobules, show no very marked changes. Their walls are loosely attached to the new-formed texture, and, while slightly thickened, do not present that degree of infiltration and puckering so evident in the alcoholic variety. The arteries show no special change. It is, however, apparent that the bile ducts have undergone a decided change. When seen in longitudinal section the epithelium is larger, the ducts, crowded with cells, ramify in various directions and their lumen is wider than normal; in cross section, the ducts are found to be surrounded with many concentric layers of new-formed connective tissue far exceeding in thickness the coats of either vein or artery, and often that of the calibre of the involved duct itself. In many localities the tissue immediately surrounding the ducts is the seat of a round-celled proliferation, indicating probably the earliest stage in the process of connective tissue overgrowth.

The capsule of the liver shows no special thickening, but very gentle depressions occur at the boundaries of subjacent lobules, where strands of connective tissue find attachment to the capsule.

With the high power, the characteristics just referred to can be more readily distinguished. The liver cells, with sharply defined outlines, clear, distinct nucleus and homogenous protoplasm, are, perhaps, even of slightly larger dimensions than in the normal liver. Hanot claims that this is the rule in biliary hypertrophic cirrhosis; the point is disputed by Ackermann and others. Whether enlarged or not, it is very evident, with the greater magnifications, that they have, for the most part, remained unscathed by the pathological process around them. They extend to the very edge of the interlobular connective tissue growth, and it is only at the boundaries of the lobule that they may occasionally be seen, slightly flattened and misshapen, less deeply tinged with the staining fluid, and with a faintly outlined nucleus. The normal arrangement of the cells in columns has also been preserved. Here and there, instead of distinct lobules, small groups of cells, ranging from two upward, will be found imbedded in a dense overgrowth of connective tissue. These have been cut off from some neighboring lobule by the shoots of new tissue that grow into the lobules from the periphery, finally reaching across the lobule, so that these become segmented. It is this subdivision of some of the lobules into smaller aggregations of cells that explains the difficulty of locating the hepatic radicle, which, when present, is found to preserve its normal relation to the surrounding liver cells, its walls showing no thickening.

The connective tissue, while not peculiar, is still very different in appearance from that observed in other forms of cirrhosis. It has been compared by Brissaud to the peculiar spongy, neuroglia-like product that is seen in the brain and cord in disseminated sclerosis. It has comparatively little tendency to fibrillation; its spindle cells retain their contour, without elongation; and the greater portion of it, as seen in its more recent stages, dipping into the lobules, consists of a faintly granular homogenous structure, having no sign of organization. It is probably this peculiarity which explains the integrity of the liver cells. The new growth, soft and spongy, insinuates itself between the lobules, or, it may be, between the cells, merely crowding them aside to make room for itself, but not otherwise exercising much pressure upon them, its growth being so gradual that the capsule is slowly distended, and the nutrition of the cells unimpaired. The round-celled infiltration, already alluded to, is found with the high power to consist of young cells, staining readily, and arranged particularly around the biliary ducts, as though the irritation leading to the new formation had started there. The epithelium of the ducts remains unchanged; its distinctively cylindrical character is plainly evident, the calibre of

the ducts is sometimes open, sometimes crowded with cells as from a catarrhal proliferation. Nowhere is there any evidence of biliary pigmentation or obstruction, such as can be seen in another specimen which I present. A number of small secondary biliary vessels of new formation are also seen in the connective tissue; and the columns of liver cells are separated in places by spaces corresponding to the dilated biliary radicles.

With these lesions and these symptoms, can we substantiate the claim of biliary hypertrophic cirrhosis to be regarded as an independent disease? Most assuredly. Clinically we have the following facts:

1. The tender age of the patient. From an examination of the literature of the subject, consisting for the most part of case reports, with occasional account of a microscopic examination, it will be seen that nearly all cases belonging strictly to this category are under 40 years of age, the majority below 30. The two sexes appear to suffer in nearly equal ratio. Children are not exempt. Thus, Smith[1] reports a case in a child of 4½, without hereditary history of syphilis or alcoholism; Florrand,[2] case in man aged 19; White,[3] case in child aged 9, the liver weighing 41 oz.

Hatfield[4] reports a case in a new-born infant.

2. The long duration of the illness. There is the history of suffering, extending as a rule over several years. In the case from which the sections are taken, symptoms referable to the liver disease occurred at least four years before death. The average duration is given at from two to four years.

3. The early occurrence of jaundice, with gradual increase in the intensity of the bile staining, and death at the close of profound nervous disturbances, generally attributed to cholemia. The jaundice may be so slight as to attract but little attention at first; it may lead to pruritus, more or less intense; there may be exacerbations and remissions, but it rarely disappears entirely, even for a short period. With the jaundice—and this point deserves special emphasis—there is diarrhea (from four to eight stools in the twenty-four hours), the stools being liquid or mushy, and either of the normal color or of a deeper brown, showing that bile freely enters the intestine. The patency of all the biliary passages, and the fact that the gall-bladder is generally found to contain more than the usual quantity of bile at the autopsy, plainly shows that the jaundice is not obstructive in origin, as was once asserted.[1]

It is to be remembered that jaundice is an occasional manifestation in the course of atrophic cirrhosis; but the fact that Mangelsdorf, quoted by Freyhan, in trying to make this symptom wholly lacking in diagnostic significance, was able to collect in the whole literature of the subject only eight cases of atrophic cirrhosis with jaundice, goes further than all else to show its very exceptional appearance in that disease.

4. The absence throughout the entire affection of the usual signs of portal obstruction. There is, in the history of the disease, neither the enlargement of the superficial abdominal veins, the formation of the so-called caput medusæ, nor ascites; and though it should appear from an examination of the specimens in our own case that the portal vessels imbedded in this immense overgrowth of new-formed connective tissue must have their walls compressed, the circulation goes on without evidence of impediment; so that Ackermann was able to inject the liver from the portal vein, the fluid, tinged with Prussian blue, passing freely into the hepatic radicles in all parts of the liver substance.

5. The occurrence of severe hemorrhages from the mucous surfaces at a comparatively early period. Epistaxis, so severe as to be alarming, occurred several times in the case here reported. A similar fact has been noted in others. Hematemesis, melena, bloody urine, and vaginal hemorrhages have been reported.

6. The development of febrile attacks, of variable duration, resembling in type either remittent or typhoid. This feature is not invariably associated with the disease, but is by no means uncommon. When fever develops and is associated with pain and gradual enlargement, it is easy to mistake the condition for hepatic abscess. Jaccoud and Molénes report cases occurring in their respective practices in which this mistake was made, and the supposed abscess repeatedly aspirated, the needle only withdrawing blood.

7. The tendency to progressive and extreme enlargement of the liver, with pain in the right hypochrondrium, fulness and weight, and manifest increase in the circumference of the abdomen, just below the costal margin. As a concomitant of the hepatic enlargement, the spleen is also increased in size. The hepatic enlarge-

[1] *Trans. Path. Soc. Lond.*, Vol. XLI.
[2] *Progrès Med.*, 1885.
[3] *Path. Soc.*, Vol. XXXVI.
[4] *Trans. Am. Pediatric Society.*

[1] Musser (*Am. Jour. Med. Science*, 1884) is, I think, in error in stating that the term *biliary* is applied to these cases because of obstruction of the duct.

ment, while generally uniform, may involve one or other lobe in preponderating degree. The weight of the organ many reach nine pounds and over.

8. The inevitable tendency to a fatal termination.

9. The inability to refer the development of the disease to alcoholic excess, in all but a small proportion of properly classified cases. I am aware that upon this point issue is likely to be taken, yet an examination of cases hitherto assigned to this category will convince any impartial critic of the correctness of the statement. It will be seen that many cases occurring in patients addicted to alcoholic excess, designated as hypertrophic cirrhosis, have either presented ascites and other evidences of portal obstruction during life, or have shown, after autopsy, under the microscope, very advanced fatty changes in the liver cells. It will also appear that in nearly every instance the age of the patient has been 50 or above in male patients, though females seem to suffer at an earlier age from the effects of alcoholic excess, as regards hepatic enlargement.

Now, the term cirrhosis was originally introduced by Laennec merely to designate a peculiar color change in the liver. It has received wider application in that it has been used to designate not only those conditions of the liver characterized by connective tissue overgrowth, but is employed as a generic term to denote a pathologic process in which this proliferation is the main feature, so that we speak of cirrhosis of the kidney, of the lungs, of the pancreas, etc. If then, all cases in which, with the new development of connective tissue, there is increase of size in the liver shall be termed hypertrophic cirrhosis it will become necessary to employ a second qualifying adjective to indicate more clearly the nature of the enlargement. For increase of connective tissue, with hepatic enlargement, occurs under divers conditions, so that we have a hypertrophic cirrhosis from venous engorgement in cases of valvular disease of the heart, the nutmeg liver; from syphilis; from malaria; from permanent obstructions of the common duct, as by the impaction of a gall-stone, or by cancer of the head of the pancreas; from fatty change with cirrhosis, as the result of chronic alcoholism, and from diabetes. I am fortunately in position to show you examples, under the microscopes set up in the adjoining room, of the histological changes wrought by each of these different causal elements in the liver tissue, in contrast with the changes of so-called biliary hypertrophic cirrhosis.

The nutmeg liver shows the new growth plainly radiating from the hepatic radicle, the portal vessels and gall ducts being perfectly free, the liver cells, however, undergoing some degeneration, the walls of the hepatic vessels being greatly thickened. The syphilitic induration has not the regular distribution of the other forms, but presents a ribbon-like development, in which there may often be found minute gummata; sooner or later there comes, in this form, marked cicatricial depressions and irregularity of the capsular surface. In chronic malaria there is deposit of masses of black pigment between the cells.

In chronic biliary obstruction there is marked irregularity in the size and outline of the liver cells; the nuclei are not clear, the protoplasm stains imperfectly; the minute biliary radicles between the cells are enormously dilated, and filled with inspissated bile, which appears on the sections as patches of a greenish or brownish color. The bile ducts are surrounded by some new formed tissue which has neither the regular distribution nor the bulk of the connective tissue in the disease we are studying. I would call attention to this fact particularly, since Charcot, influenced by what he observed as the result of ligature of the common duct in the lower animals, proposed for this affection the name of biliary hypertrophic cirrhosis, a name that we still retain, though it does not in any way fit the pathology, seeing that the larger bile ducts are always open.

The cirrhotic liver with fatty degeneration shows such a degree of fatty change in the liver cells that its recognition requires no further explanation. In diabetes, Hanot and Chaufford noted the rare occurrence of hypertrophic cirrhosis, with pigmentation of the liver cells; as yet, but six cases of this variety have been reported.

Hanot, Sabourin, and others have given to some of these varieties a special name, which I think it would be well to retain in future description. Thus we may designate—

As biliary hypertrophic cirrhosis, the affection we study to-night;

As syphilitic hypertrophic cirrhosis, the cases due to this specific poison;

As obstructive hypertrophic cirrhosis, the cases resulting from closure of the duct;

As fatty hypertrophic cirrhosis, the enlargement due to chronic alcoholism;

As pigmentary hypertrophic cirrhosis, the cases occurring in diabetic patients;

As congestive hypertrophic cirrhosis, the cases resulting from heart disease, the nutmeg liver;

As malarial hypertrophic cirrhosis, the cases due to chronic malarial poisoning.

The recognition of the particular variety present in any given instance has a manifest bearing on prognosis and treatment.

Up to this time the treatment in all cases of biliary hypertrophic cirrhosis has been unsatisfactory; but the results obtained in the fatty hypertrophic cirrhosis with calomel, given according to the plan of Saccharjin, would certainly justify its employment in this affection, however different the two processes are in point of causation.

A final word as to the pathology of the disease. It seems clear, from an inspection of the specimens, that the essential feature is primarily an inflammation in and about the biliary ducts, angio-cholitis, and peri-angio-cholitis. What determines this is not yet clear. Vincenzi's theory of a micro-organism wholly lacks corroboration; but once begun, the process goes on within and outside of the biliary vessels, leading to cellular proliferation and partial or complete blocking within; to formation of a young and rapidly growing connective tissue without the ducts. The circulation meanwhile is unimpaired, so that, with the proper advent of blood, and with perfect integrity of the secreting cells, bile continues to be freely formed. It may be formed in excess, as Ackermann believes, in consequence of the irritative process in and about the hepatic lobules. The blocking of some of the minute ducts offers obstruction to its passage; the patency of others permits the outflow of a sufficient amount to distend the gall-bladder, and give to the feces their normal color. Where the ducts are blocked, resorption of the excreted bile occurs, leading to jaundice, and finally to cholemia. This is the theory of Charcot, essentially modified in detail by Ackermann, whose views upon the subject seem to fit the case more nearly than any other explanation offered up to this time.

I would refer once again to the fact that biliary hypertrophic cirrhosis cannot be considered as, in any sense, connected with the ordinary atrophic variety; that it differs in important particulars from other forms of hepatic enlargement, due to connective tissue growth; and that by every right of etiology, pathological anatomy, and symptomatology it must be conceded a position in our nosology.

BIBLIOGRAPHY.


Charcot, *Leçons sur les Maladies du Foie.*
Mosler, *Berl. klin. Woch.*, 1882.
Ackermann, *Virchow's Archiv*, Band 80.
Mangelsdorf, *Deutches Archiv f. klin. Médicin*, Band 31.
Chantemesse, *Progrès médical*, 1881.
Sabourin, *Archiv. de Physiol.*, 1881.
Hanot, *Thèse de Paris*, 1876.
Illowy, *Cinti. Lancet-Clinic*, 1881.
Florand, *Progrès médical*, 1885.
Mason, *Boston Med. and Surg. Jour.*, 1886.
White, *Trans.* Path. Soc. London, Vol. 36.
Hayem, *Gazette hebdomadaire*, 1883.
Molénes, *Progrès médical*, 1883.
Barbier, *Progrès médical*, 1883.
Musser, *Am. Jour. Med. Sciences*, 1884.
Courbault-Condoleon, *Progrès médical*, 1884.
Chauffard, *Traité de Médecin* (Charcot, Bouchard and Brissaud).
Demange, *Revue de Médecin*, 1888.
Price, *Guy's Hospital Reports*, Vol. 42.
Brault and Galliard, *Archiv gen. de Médecin*, 1888.
Clarke, *Brit. Med. Jour.*, 1890.
Strümpell, *Lehrbuch.*
Smith, *Trans.* Path. Soc. London, Vol. 41.
Ferrand, *Gaz. des Hôpitaux*, 1894.
Sharkey, *St. Thomas Hospt. Reports.*
Copeman, *Lancet*, 1889, Vol. 1.
Carrington, *Guy's Hospt. Reports*, Vol. 42.
Freyhan, *Virchow's Archiv*, 1892.
Brooks, *Brooklyn Med. Jour.*, 1893.
Meredith, *Brooklyn Med. Jour.*, 1892.
Osler, *Canada Med. and Surg. Jour.*, 1877.
Hatfield, *Trans.* Am. Pediatric Society, Vol. 1.
Sior, *Berl. klin. Woch.*, 1892.
Schwass, *Berl. klin. Woch.*, 1888.
Saccharjin, *Zeitschr. f. klin. Medicin*, Band 9.
Freyhan, *Berl. klin. Woch.*, 1893.
Yule, *Lancet*, 1870, Vol. 2.


## CLINICAL LECTURE.

### *TRAUMATIC CATARACT.*[1]


BY S. D. RISLEY, M.D.,
OF PHILADELPHIA.


WHEN I had the pleasure of meeting you last, I presented for your study the more common forms of cataract. These, we saw, were the soft and hard cataracts, the former occurring in early life for the reason that the lens was then elastic and soft. With increasing years it increases in density, loses the power of changing its form, as it is able to do in youth, and becomes hard. But this we saw was a physiological process and had no necessary relation to loss of transparency, but that when opacity did occur from any reason the result was a hard cataract. I further urged upon you the fact that opacity of the crystalline lens is not necessarily a concomitant of old age, and should not therefore be classified as senile cataract. Common observation shows that even in advanced age, cataract is the exception, so that we are driven to conclude that when it does occur there must be some special cause for its occurrence. This, I told you, would be discovered in the impairment of the nutrition of the lens by disease of the intra-ocular tunics, usually affections of the choroidal tract, either of purely local origin, as in cases of choroidal disease due to eye strain, exposure to heat, etc., or associated with some general dyscrasia.

To-day I wish to bring before you a group of cases

[1] Delivered at the Philadelphia Polyclinic College for Graduates in Medicine, February 28, 1896.

which will serve as a text for the study of traumatic cataract.

Opacity of the lens due to injury may, for purpose of study, be placed in two groups. First, those which have been caused by penetrating wounds; and second, by blows which have caused the rupture of the lens capsule and its suspensary ligament.

It is well known that whenever the aqueous humor is allowed to come in direct contact with the lens cortex that it first causes it to swell, then to become opaque, and finally has the property of dissolving it, after which it is carried off through the filtration channels and absorbents. The surgeon frequently takes advantage of this fact in his treatment of the soft cataracts of youth and early middle life. Now any injury, therefore, which rends the delicate capsule of the lens, causes it to become cataractous, and if the rent is sufficiently extensive, may bring about the absorption of the entire lens. It not infrequently happens, however, that the opening speedily closes after admitting sufficient aqueous to render it wholly or partially opaque, but not sufficient to cause its solution, leaving a permanently opaque lens—a traumatic cataract. Those opacities of the lens, caused by penetrating wounds, may be placed in two classes: first, those due to some sharp instrument, which is subsequently withdrawn; and second, those produced by small particles which penetrate the lens and remain within the eye. I have seen examples of the first class produced by a shoemaker's awl, the point of a penknife, a sharp tack, and you will recall the case of the blacksmith who was discharged from the hospital two weeks ago who had a traumatic cataract, produced by the flying point of a horseshoe nail. A fork tine is frequently the penetrating instrument.

Fragments of iron or steel from the head of a hammer or cold-chisel, fragments of gun-cap, grains of powder, etc., not infrequently enter the cornea and penetrate the capsule of the lens, burying themselves deeply in its substance where they may become encapsuled and remain for an indefinite time; or, passing directly through, may find lodgment within the vitreous chamber. The aqueous is admitted to the lens substance and causes partial or complete opacity, and a corresponding impairment of vision. But these accidents introduce other elements of danger which may prove far more serious than the opacity of the lens. If the foreign body passes into the vitreous chamber and rests upon some portion of the uvea, but especially if it is lodged in the ciliary region, sympathetic irritation is liable to occur and may necessitate the excision of the fellow eye. If the foreign body is copper or brass, although they may be sterile at the time of entrance, as would be the case with a fragment of gun-cap, they nevertheless seem to exert, as has been shown by Leber, an especially baneful influence over the eye, probably through the irritating salts which are formed through their chemical decomposition. Then it must always be remembered that the penetrating instrument, or the entering foreign body, may carry into the interior of the eye micro-organisms which may lead to its speedy destruction by suppurative panophthalmitis, or, even a fatal involvement of the fellow eye. If the cataract has been caused by a blow sufficiently severe to have ruptured the lens capsule and the suspensary ligament, it should be born in mind that it is probable that deeper injury has also been produced. Ruptures of the choroid and retina, and retinal detachments, are by no means rare as the result of blows. A blow with the fist, a baseball, or even the small ball of putty blown from a boy's "blow-gun," may cause not only a traumatic cataract, but as I have several times seen, may cause serious injuries at a point in the deeper tunics at the opposite pole of the eye, usually in the region of the posterior pole. This possibility should be kept in mind and will always suggest a guarded prognosis in these patients, with opacity of the lens following blows upon the eye.

Dismissing these considerations, however, thus briefly, I wish to call your especial attention to a danger often present in these cases, but of an entirely different character. If the rent in the capsule is large, the lens may swell so rapidly under the action of the aqueous humor as to cause a transient glaucoma by pressing the iris forward into the angle of the anterior chamber. By this means the spaces of Fontana are closed, the excretion of intra-ocular fluids impeded or prevented, and thus an increase of intra-ocular tension produced. Or it may be that the increase in the volume of the lens is a factor in the increased tension.

The opacity of the lens produced by injury is often only partial. Small particles of various kinds penetrate the cornea, and their weight or their momentum may be sufficient only to bury them superficially in the lens cortex. Here they are surrounded by a small opaque area, which may remain to the more or less serious and permanent impairment of vision. Or the substance may pass through the iris and enter the lens at its periphery, causing a partial opacity, which may encroach but slightly, if at all, upon the area of the pupil. I recall the case of a gentleman who received such an injury from a small piece of the surface of a glazed brick at which he was firing with his rifle. I watched this for several years, the fragment remaining encysted in the periphery of the lens and causing very little impairment of vision. Grains of powder thrown into the eyes by the premature explosion of blasts in mines and quarries, is a very frequent cause of traumatic cataract. The man, upon whom you witnessed the operation of iridectomy at the clinic yesterday, was an illustration of this class of injury. In that case the iridectomy was preliminary to an attempt to extract the opaque lens.

In the treatment of traumatic cataract, one is often at a loss as to the safest procedure to adopt. In cases of transient glaucoma, where the swelling of the lens is the result of a penetrating wound by some sharp instrument which has been withdrawn, the problem is comparatively simple. A section of the cornea can be made, and a portion of the lens removed, with or without an iridectomy, but when the foreign body is imbedded in the lens substance, the dangers are greater. There is always danger of the foreign body escaping from its bed and falling back into the eye upon the ciliary body. This is of course a most serious accident. If the foreign body is causing no trouble, and if the fellow eye is good, it is

usually best to let it alone, since your most successful endeavor cannot restore binocular vision. Other considerations should however guide you in some cases. In one of the group before you the cataract was produced by an injury with a baseball. As you see, he has a white lens which has been partially absorbed. He has been under observation for many months with recurring attacks of ciliary injection and tenderness. These have become less frequent and severe. His occupation leads him into danger from injury because of his one-sided blindness. I have therefore advised him, when his eye is free from the recurring attacks of inflammation, to have the lens removed. While the operation may not secure perfect binocular vision, it will nevertheless give him sufficient vision on the side of the injured eye to avoid approaching teams and other sources of danger.

## CLINICAL MEMORANDA.

### *DUPLEX PERSONALITY.—REPORT OF A CASE.*[1]

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DUPLEX personality is a psychical condition which did not, till recently, attract very much attention; but since brain function and brain action have begun to be more deeply and more thoroughly studied, it has been brought forward as a subject worthy the consideration of the profoundest thinkers. Several valuable contributions relating to diseases of personality, as they are called, have recently appeared. The greater portion of the literature comes from the French, but this country is by no means without its students and investigators in this field of science. Dr. Hodgson, of Boston, Secretary of the American Branch of the Society for Psychical Research; Dr. R. Osgood Mason, of New York; Dr. A. E. Osborne, of California; Dr. Irving C. Rosse, of Washington, D. C.; Dr. Weir Mitchell, and others have each reported interesting cases of duplex or of triple personality, or of periodic amnesia.

The Society for Psychical Research and many eminent psychologists are making studious efforts to understand and to explain the strange mental phenomena exhibited in this class of cases, but no one has yet been able to give a clear, comprehensive explanation of them. However, authenticated data, facts regarding cases, etc., are being accumulated and studied, which, in time, will doubtless lead to a scientific elucidation of the psychological forces involved in duplex individuality, temporary extinction of memory of the past, and allied conditions.

What is understood by that remarkable abnormality, known as duplex personality, is that there is a second and distinct consciousness or individuality entirely different from the original or primary one—that there are two more or less complete phases of existence. In this state of abnormal mentality, mental activity is not suspended. The actions of the mind, however, are in the nature of automatic operations; there is a sort of "reflex activity of the cerebrum."

It has been demonstrated that by the means of hypnotism this second personality, with its added powers of perception, may be brought into action and all the incidents which occurred during that period, clearly related.[1] Somnambulism and some dream states might be considered typical examples of another personality—double consciousness—somewhat analogous to the psychic condition existing in this class.

A remarkable "dislocation of memory," to use the term suggested by Sir H. Holland, occurred once with Sir Walter Scott.[2] He dictated, during a prolonged illness, to his amanuensis the whole of the "Legend of Montrose,' almost the whole of "Ivanhoe," and the greater portion of the "Bride of Lammermoor," while in a state of "second consciousness." When the works were finished and handed him "he did not recollect one single incident, character, or conversation." The "original incidents" had not been erased from his memory, "but he did not recollect a single character woven by the romancer, nor one of the many scenes and points of humor, nor anything with which he was himself connected, as the writer."

The counterpart of this strange mental condition is sometimes observed in certain delusional insanities; temporary suspension of consciousness may be caused by certain drugs, hysteria, epilepsy, or other diseases, toxic elements in the blood, change in functions of the circulation and of nutrition, traumatic or organic lesions of the brain-substance or of the nerve-cells, etc.

The following case, the history and details of which were kindly given me by an eminent practitioner, Dr. H. G. Leigh, Sr., of Petersburg, Va., came under my observation within the past year:

Mr. K. was fifty years old, of splendid physique, in good health, in fairly comfortable circumstances, and doing a prosperous business. He was sober, moral, and industrious, of affable disposition, popular with a large circle of friends, member of several secret and benevolent orders, happy and content in his domestic relations. He was born and reared in Virginia, had resided and conducted business in ——— for twenty years or more, and deservedly bore the reputation of being a correct, straightforward man in every particular. For years he had been one of the town officials.

One of his near relatives (an uncle, I think) at about the age of fifty, without any apparent reason whatever, went suddenly out West, leaving his wife and children, and was not heard of for many years. Finally he came back on a visit and remained a short time with his family and old acquaintances, but no explanation was given of his strange conduct. It was thought that he had some form of mental disease.

[1] Abstract of a paper presented at the Medico-Legal Congress, held in New York, September 4-6, 1895. From advanced sheets *Medico-Legal Journal* and the *Bulletin of the Congress.*

[1] Refer particularly to case reported by Richard Hodgson in "Proceedings of the Society for Psychical Research," Part XIX, and to Dr. R. Osgood Mason's paper on "Duplex Personality; its Relation to Hypnotism and to Lucidity," *Journal of the American Medical Association*, November, 30, 1895.

[2] In Carpenter's Mental Philosophy, pages 139 and 444, quoted from Lockhart's Life of Scott. Chap. XLIV.

One day, while apparently in perfect health, without any premonitory symptoms of mental derangement, Mr. K. went to a Northern city to purchase goods for his store. While there two days he transacted a great deal of business, met many old friends, and exhibited no indication of aberration of mind. Starting homeward, he registered as a passenger on a certain steamer; feeling very tired, he secured a stateroom, to which he at once repaired, changed his linen, etc. When tickets were collected he was missing. He had *suddenly and mysteriously disappeared.* No one had seen him leave the boat, jump, or fall overboard. An acquaintance, however, said that he was reasonably certain that he saw Mr. K., several hours after the boat had left, in one of the depots in the city. He was sitting down, hat pulled over his face, and seemed to be in a "deep study," so he was not disturbed. Mr. K.'s open valise and all his clothes, except those he wore, were found in his stateroom. The room door was open, but the key had been taken away. Unusual prominence was given the matter in the public press, and various explanations were suggested during the vain search that followed, until finally investigation was abandoned, the theory that he was dead accepted, and the Court appointed an administrator of his estate, and a guardian for his children. His business was purchased by his son, and everything was moving along smoothly when, *six months after* he was last heard of, he suddenly and unexpectedly appeared at the home of a relative in a distant Southern city. He was brought home in a composed, but partially dazed condition, able to recognize but few of his friends. He was an entirely changed man; the physical and psychical metamorphoses were quite complete. He had reduced in weight from 250 to 150 pounds, and was very feeble. He wore the same suit of clothes he had on at the time he disappeared, and had in his pocket the check and key which were given him on the boat.

He was at once put under treatment, and within four weeks recovered his previous bodily and mental health, and has since conducted his old business with his accustomed skill and industry. A day or two after his return home an abscess, deep down in the auditory canal, broke and discharged a large quantity of sanguino-purulent matter. *Immediately thereupon improvement began.* and went on rapidly. This was a remarkable fact, and is, I think, worthy of special note.

Hear Mr. K.'s own account of his strange case: "I was feeling very tired, thoroughly fatigued, after a very busy day in the city, so went to my stateroom immediately upon going aboard the boat, and changed my clothes. Up to that time I was thoroughly conscious, but *after that I recall nothing, all was oblivion till six months later*, when I came suddenly to myself in a distant city in the South, where I knew no one. I found myself driving a fruit wagon on the street. I was utterly astounded. Why I was there, how I got there, when I came, what I had been doing, were puzzling questions to me. Upon inquiry, I learned that I had been there and at work for some time. My life, since I was in that stateroom, six months previously, had been an absolute blank to me. I can give no account of myself during that period of time. *I recall nothing.*

"I started at once for Virginia, but on the way I again lost consciousness, though for only a day or two. When further on the way home I felt so utterly worn out, I stopped in a certain town and went to the house of a near relative. From there I was taken home. I was in a half-dazed, confused condition, and remained so some days longer. I am now feeling well and all right."

He could not tell where he had lived in that Southern city, or the name of any person he had known there. He was, indeed, a stranger in a strange land. Nothing definite has been ascertained regarding his life during his *second consciousness.*

This case bears many striking resemblances to others that have been from time to time reported, but there are two points of special interest. First, the *inherited tendency* to *eccentricity*, if not to *insanity.* Second, *the abscess in the ear*, the breaking of which was followed by a rapid return to normal mentality.

[Nearly a year has elapsed since recovery and no relapse has occurred; on the contrary, Mr. K. has enjoyed excellent health, mentally and physically, and is now doing a good mercantile business at his old stand. ]

REFERENCES.

Among the recently published articles bearing upon the subject of this very incomplete paper, I have read with special interest and profit the following:

"A Case of Epilepsy and Double Consciousness." By G. R. Trowbridge, M.D., Danville, Penn., MEDICAL NEWS, February 21, 1891.

"A Case of Double Consciousness." By Richard Hodgson, LL.D., Boston, Mass., Proceedings Soc. for Psych. Research, July, 1891.

"Triple Personality." By Irving C. Rosse, M.D., Washington, D. C., *Journal of Nervous and Ment. Dis.*, March, 1892.

"People Who Drop out of Sight." By A. E. Osborne, M.D., Glen Ellen, Cal., *Medico-Legal Journal*, June, 1894.

"Duplex Personality. Its Relation to Hypnotism and to Lucidity." (Read at meeting of Am. Med. Association, May, 1895.) By R. Osgood Mason, M.D., New York, *Jour. of Am. Med. Association*, November 30, 1895.

"Dual Personality," etc. By Lewis C. Bruce, M.D., *Brain*, recent number.

## RECTAL GONORRHŒA AND GONORRHŒAL ENDOMETRITIS.

BY JOHN J. ORTON, M.D.,
OF RANDOLPH, O.

WHEN I read Dr. Murray's article on "Gonorrhœa of the Rectum" in THE NEWS of March 7th, it occurred to me that a report of a similar case, which has recently been under my care, might be of interest to the profession.

On November 12, 1895, I was called to visit Mrs. ——, aged forty, mother of two children, the youngest of which is fourteen years of age. Her previous health

had been quite good, except that she suffered at times with indigestion. For several days previous to my visit she had been suffering with the usual symptoms of acute vulvitis, for which her husband had consulted me at my office and obtained medicine. He also told me that she had a swelling of one of the labia. Examination revealed a fully developed vulvo-vaginal abcess, vulvitis, and urethritis. Vaginitis was also suspected but, as the parts were so sensitive on account of the abcess, no attempt was made to pass the speculum. I opened the abscess, evacuated the pus, and ordered the treatment continued that I had prescribed when consulted at the office, which consisted of lead and opium lotions for the vulvitis, hot poultices to the abscess, and vaginal injections of warm water containing a solution of lead acetate. A day or two later I was able to pass the speculum and found, as I expected, a vaginitis. The appearance of the os uteri looked as though the woman had been suffering with a chronic erosion of the cervix before her attack of the gonorrhœa.

There was no question as to diagnosis, as the husband admitted that he was having an attack of gonorrhœa.

The usual remedies were used with good success in curing the vulvitis, urethritis, and vaginitis, but other complications developed which taxed my skill. In spite of the best treatment with which I was familiar, either by experience or reading, cervical endometritis developed, which gradually crept onward until it invaded the uterine cavity, and I had to deal with a corporal endometritis of gonorrhœal origin. The patient had complained of pain and an uneasy feeling in the rectum, which I supposed was caused by internal hemorrhoids. One morning while using Sims' speculum, during the treatment of the vaginal and uterine trouble, I was amazed to see about a teaspoonful of muco-pus ooze out of the anus when I depressed the perineum with the speculum. It immediately dawned upon my mind that my patient was suffering with gonorrhœa of the rectum in addition to that of her genital organs. In fact, everything possible was infected except the tubes and the bladder and the parts beyond them. Unless vigorous treatment was used it would probably be only a matter of time until pus-tubes would be added to the already serious condition of my patient. She was then suffering severely with uterine cramps, and bimanual palpation showed the uterus to be sensitive and tender.

On January 14, 1896, Dr. C. S. Hiddleson administered chloroform, and while she was under the anesthetic I first cleansed the vagina and vulva with an antiseptic solution and irrigated the uterine cavity with $H_2O_2$, one part to boiled water, three parts to wash away the purulent discharge. I then thoroughly curetted the uterine cavity and cervical canal with a sharp curette, irrigated again with plain boiled water, applied equal parts of pure carbolic acid and tincture of iodin to the endometrium and cervical canal, and finished by packing the uterus and vagina lightly with iodoform gauze. The patient rapidly improved from that time on, but some cervical catarrh remained which eventually responded to treatment.

The rectal trouble was treated first with injections three or four times a day of $H_2O_2$, one part to water, three parts containing sulpho-carbolate of zinc, five grains to the ounce. This seemed to do good until, on December 29th, she was seized with a constant desire to go to stool and passed blood, mucus and shreds of mucous membrane. I then changed the rectal treatment to injections of creolin one-half to three-fourths teaspoonful to a pint and a half of warm water every six to eight hours, alternating with fl. ext. hamamelis, four to six drams to water, a pint and a half. This proved efficient and the rectal difficulty gradually subsided. The injections were reduced in frequency as improvement progressed, and finally omitted, but, as she had a slight return of the trouble, they were again resumed with good results.

Like Dr. Murray, I found no help from text-books in treating the rectal complication. Rectal gonorrhœa is not mentioned in any text-book I have consulted, and Dr. Murray's article is the first I have ever seen on that subject.

To explain how the rectum became infected in my patient is difficult. My theory is that the discharge from the vagina running down over the anus was the cause, or else a little of this discharge was introduced into the rectum by using an enema to move the bowels, although a different nozzle was employed for this.

## MEDICAL PROGRESS.

***The Action of Erysipelas on Syphilis.***—According to the *British Medical Journal* for February 29th, RUDOLPH, in *Centralbl. f. inn. Med.*, February 1, 1896, relates two cases with syphilitic manifestations in which an accidental erysipelas occurred. A man, aged fifty-two, had two syphilitic ulcers on the face. The erysipelas affected both sides of the face. Five days after the defervescence, and nine days after the onset of the erysipelas, the ulcers were healed.

A woman, aged twenty-five, contracted syphilis five years previously. She now had severe headaches, and paresis of the left side of the face, with occasional clonic spasm. In addition there were enlarged submaxillary glands, and a chronic arthritis affecting both knees. Syphilitic cachexia was marked. She had been through several courses of antisyphilitic treatment, including mercurial injections and inunction. After an attack of erysipelas the patient was cured of her chronic syphilis. The glands went down, the pains in the head and joints disappeared, and the facial paralysis gradually recovered. For a year she remained free of any syphilitic manifestations, when a gumma appeared in the leg. The patient would not submit to further antisyphilitic treatment. The rapid and beneficial effect brought about by the erysipelas in these cases was striking. Unfortunately the first case was not seen again, and so it could not be stated whether he remained free of relapse. In the second case the cure was not permanent, but the erysipelas had more effect on the disease than the antisyphilitic treatment.

***Practical Value of Roentgen Photography (Skiagraphy).***—As an illustration of the diagnostic possibilities of the Röntgen light in surgical practice, Professor König, of

Berlin, at a recent meeting of the Berlin Medical Society (*Deutsche medicinische Wochenschrift*, 1896, No. 8, p. 113), related the case of a woman, forty-six years old, who several years previously suffered from a painful swelling of both knee-joints, which moderated upon the right side and soon disappeared upon the left. The tibial portion of the right knee-joint, however, in a short time began to swell; the joint became mobile in a lateral direction, and walking was rendered impossible. On examination the right leg was found greatly atrophied, and the knee-joint empty. The tibial portion of the joint, however, was enlarged and in circular form. The diagnosis between inflammatory disease of the tibia and a neoplasm was decided in favor of the latter from the presence of pulsation in the softened anterior portion of the tibia. Ablation of the femur was decided upon and effected. Attempts had been made to utilize the Röntgen light, but were successful only after the operation had been performed. Examination of the specimen showed the joint to contain no fluid, but presenting evidences of the existence of a previous sero-fibrinous inflammation. Sagittal section of the tibia disclosed the presence of a spindle-cell sarcoma, involving the epiphysis and the upper part of the shaft. A shadow-picture, prepared from the lateral aspect of the joint, showed the inner condyle of the femur, the inter-articular fibro-cartilage, and the upper margin of the tibia. Below the last could be seen the shadow of a peculiarly lobulated tumor of lighter shade than the surrounding bone. The lower boundary of the tumor gradually merged into the shaft of the tibia. The condyles of the femur appeared on superficial examination of normal configuration, but a skiagraph from the lateral aspect disclosed the presence, in the epicondyle, of a small body of dark contour, which upon subsequent section of the bone proved to be an enchondroma of the spo. gy portion of the epiphysis.

In the same journal containing the report of König, a case is detailed by Hammer (*Ibid.*, p. 114) in which a soldier believed that he had accidentally introduced a needle into his hand, but beyond a punctured wound no trace of the foreign body, in whole or in part, could be detected. Upon exposure of the member, however, to the Röntgen light a fragment of the needle was readily demonstrated at some distance from the wound of entrance, and was subsequently excised with especial facility.

***Prognostic Significance of Albuminuric Retinitis.***—E. Oliver Belt, M.D., Washington, D. C. (*Journal of Am. Med. Ass'n.*, November 2, 1895). The writer collected the records of 419 cases of albuminuric retinitis from ophthalmologists throughout the country: "The time allowed was too short for many to look over their records, and many had not kept trace of the patients after referring them back to the family physician, but enough cases were reported to show that the duration of life is longer among private patients, and that renal affection is immediately influenced by hygienic surroundings. However, the number of cases surviving two years was disappointingly low, and the consensus of opinion seems to be that nearly all prove fatal in less than two years.

"From all the statistics I have been able to find we get the following results: Cases in private practice, 155; of these 62 per cent. died within one year, 85 per cent. within two years, and 14 per cent. lived more than two years.

"Hospital cases, 77; of these 85 per cent. died within one year, 93 per cent. within two years, and 6 per cent. lived more than two years.

"Mixed cases, 187; of these 65 per cent. died within one year, 93 per cent. within two years, and 6 per cent. lived more than two years.

"Total number of cases, 419; of these 72 per cent. died within one year, 90 per cent. within two years, and 9 per cent. lived more than two years."

## THERAPEUTIC NOTES.

***Argonin*** is described as a combination of silver and casein, existing as a white powder, which LEWIN (*Berliner klinische Wochenschrift*, 1896, No. 7, p. 146) has employed in the treatment of acute gonorrhœa, using a solution of 3 parts to 200 of water, and making an injection of 2½ fluid drams five times daily. The results were entirely satisfactory, the medicament exerting a destructive influence upon the gonococci and being free from irritating properties, although it was wanting in astringent qualities and thus was unable to control existing inflammation of the urethral mucous membrane.

***The Treatment of Typhoid Fever with Antitoxic Serum.***—BORGER (*Deutsche medicinische Wochenschrift*, 1896, No. 9, p. 132) has employed antitoxic serum obtained from the calf in the treatment of twelve cases of typhoid fever, with results that for the present must be considered uncertain. In four cases it is thought that the serum may have exerted a favorable influence, but the most that can be said with certainty is that the injection of large doses of the serum is unattended with evil results, and that a favorable effect upon uncomplicated mild cases of typhoid fever treated early may be anticipated.

***For Epilepsy.***—

Take of

| | |
|---|---|
| Codein | ℥ j |
| Potassium bromid | ℥ ij |
| Infusion of adonis vernalis | ℥ iv |

Mix. Dose: From half a teaspoonful to a teaspoonful thrice daily.—*Gaz. hebd. de Méd. et de Chir.*, 1896, No. 17.

***For Burns.***—

Take of

| | |
|---|---|
| Aristol | From a dram to two drams |

Dissolve in

| | |
|---|---|
| Olive oil | Half a fluid ounce |

Add

| | |
|---|---|
| Vaselin, Lanolin aa | Two drams. |

Mix. Apply topically.

—*Gaz. hebd. de Méd. et de Chir.*, 1896, No. 17.

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## THE PERSONAL ADVANTAGE IN HIGHER EDUCATION.

ALLUSION has already been made in these columns to the recent decision of the Faculty of the Harvard Medical School to require candidates for admission after 1901 to present a degree in arts, science, or medicine. Great as is the importance of this step, we can but think that it is somewhat overestimated, in one particular, by our esteemed contemporary the Boston *Medical and Surgical Journal*, which says in a recent issue: "Parents will not be slow to recognize the great prestige that the degree of such a school will give their sons in the outset of their professional career, and many positions will be open to men with this higher Harvard degree to which the graduates of other schools with a lower standard could not aspire."

There is no degree which gives a great prestige to its possessor in the outset of his professional career. The average physician is dependent on the public for his livelihood, and the public cares but little about the school from which he comes while it cares a great deal about the man himself. In general, the physician's success will be in direct proportion to the thoroughness and completeness of his training, but so much depends on the man that one will gain more with small opportunities than will another with great.

Let it be understood that we are far from decrying the step which the Harvard Medical School has taken, or its influence on the profession in general; other schools will follow, and the progress of the leaders will draw in its wake the smaller colleges, and so advance will be made all along the line. Schools increase rather than decrease the number of their students when they advance their requirements and their advantages. The medical schools of New York furnish a marked illustration of this. The more rigorous the course has been made the greater has been the number of students. But we must not be unjust to the smaller schools. Many of them are doing excellent work, work of the most progressive character, and so many factors must be counted upon in determining the prestige with which a young graduate starts in his career that we may not be surprised to find, as we frequently do, that the leader in the race is reflecting honor on a comparatively obscure alma mater.

## MEDICAL ARTICLES IN LAY MAGAZINES.

*Harper's Magazine* for February, 1896, contains a contribution by Dr. Forbes Winslow on "Premonitions of Insanity."

The bad taste or judgment exhibited by the editor or publisher in soliciting or publishing such an article for presentation to the general reader does not concern us, nor will we waste time debating the ethical aspect of the question, as in these days ethics seem thrown to the winds; but the article referred to has a world of mischief in it. In a medical publication it would seem puerile; in a lay periodical it is outrageously harmful.

According to the author, using his own words, "drowsiness," "disturbed sleep," "troublous dreams," "insomnia," "giddiness," "defective memory," "want of energy," "neglect of work," "great difficulty in concentrating thoughts and ideas," or, in "turning or fixing the mind on any one subject," "wandering of mind," "restlessness," "peevishness," "capriciousness," "irritability," "seeking seclusion," "dilated, unequal,

or contracted pupils," etc., etc., are among the *premonitions* of insanity, and nowhere is it said that they, one or all, may be also symptoms of different and, very likely, easily curable affections.

The danger of thus parading before general readers, many of whom are receptive and impressionable, and some of whom are already morbid and introspective, a lot of symptoms which are possibly due to an indigestion, an anemia or a plethora, a lithemia or an old iritis, as premonitions of insanity, should be obvious to all. The harm such injudicious and misplaced information may do is incalculable. How many will it temporarily rob of peace of mind? How many will it make permanently unhappy and apprehensive? How many will, because of it, brood over some simple ailment until their morbid fears become delusions, their hypochondriasis melancholia? Who, knowing the tendencies of our neurotic age, dare say that scores of cases of mental alienation will not trace their aggravation, nay, very inception, to this piece of impudent folly?

The influence for harm in this article is magnified because its author poses as an expert alienist, and testified as such in a recent homicide trial in this city. Medical experts are in sufficiently bad odor already; but what shall we think of one who publishes broadcast to the world such a statement as this: "There are so many varieties, and so much light and shade to be observed in madness that only an experienced authority can detect the insidious but sure approach of that malady which deprives one of nature's light and reason and reduces him to the level of the beast which perisheth." Thus, after instructing us how to diagnose and perhaps make ourselves insane, he says only an authority can surely detect the truth—and he is an authority!

## VENEREAL DISEASES AND SYPHILOLOGY.

### NEW THERAPEUTIC METHODS IN SYPHILIS.

Like the hunt for the philosopher's stone and the method of making artificial diamonds, the search for an ideal treatment of syphilis goes merrily on. One reads with amazement the chimerical and even dangerous methods which are gravely advocated for the treatment of this infection, and one marvels at the audacity of some of the claims made for their curative effects. One of the latest fads is to inject solutions of bichloride of mercury directly into the veins, with the idea of producing a certain and rapid result. The vogue of this seemingly dangerous procedure had its origin in certain good results obtained by Bacelli by the intravenous injection of quinin in malaria. This author and Pyle have already written of the benefits to be derived in syphilis by throwing the sublimate solution directly into the veins. Görl gravely informs us (*München. med. Wochenschr.*, No. 20, 1895) that he injects an aqueous solution of bichloride, of strength of 1 to 3 per cent., into veins rendered very visible by ligation or pressure farther up the limb. Before the injection is thrown in, a few drops of blood should be allowed to escape through the hypodermic needle, in order to give the operator confidence. It is said that this little operation is painless and free from danger; that a small dose of the drug only is required, and that the resulting cure is rapidly effected. In some cases the veins are so hidden or so little developed that they do not lend themselves to the treatment, which should be reserved for cases in which a rapidly produced effect is necessary. Bruni (*Il Policlinico*, May 11, 1895) details the case of a young man syphilitic for four years, who suffered from Jacksonian epilepsy, which was not relieved by injections of gray oil and the internal use of iodide of potassium. Three milligrams of sublimate in watery solution were thrown into the left median cephalic vein, and the next day six milligrams were similarly injected. After these two injections the epileptic attacks and the headache ceased, and as a result of the use of sixteen injections the patient was pronounced cured.

Dinkler (*Berl. klin. Wochenschr.*, pp. 382, 410, and 437, 1895) treated nine patients by this method, and he considers it more effective than the usual modes of administering mercury. This author thinks with Bacelli that by intravenous injection the mercurial is brought into immediate contact and acts directly upon the vascular walls, which are so constantly affected by syphilis. This point, in my opinion, is worthy of further thought and study.

Dinkler's results were strikingly good, but he is evidently alive to some of the shortcomings of

this treatment. He also emphasizes the fact that some people have inaccessible veins. In addition to this objection he also mentions thrombosis and embolism. Dinkler thinks with Blaschko that relapses are more to be feared when the intravenous treatment is used than when mercurial inunctions are made, for the reason that the mercurial salt is so rapidly eliminated from the system. Dinkler concludes that, although the treatment is rational, it will never displace the older methods; that it may be employed in cases of lesions having a rapidly destructive course, in many emergencies, and as preliminary to general anti-syphilitic treatment. He thinks that it will prove valuable in some grave cases of cerebral syphilis, and that in desperate cases it may be used in a limited manner simultaneously with mercurial frictions.

Stoukovenkoff (*Meditzin. Obozrenié*, No. 18, 1895) has used intravenous injections of sublimate and benzoate of mercury in thirty cases of early syphilis, and has seen rapid results follow therefrom. He found that the mercurial was excreted by the kidneys and the sudoriparous glands, and that the quantity thus eliminated was in direct proportion to the amount injected. He found that the quantity of mercury necessary to produce a therapeutic effect was as large as when the drug is administered hypodermically. In this view he is not in accord with Bacelli. Stoukovenkoff speaks very significantly of such complications as phlebitis of one or two months' duration, of abscesses and thrombosis, but thinks that with an improved technique these drawbacks will disappear. In contrast with the foregoing putative good results it may be interesting to know that Hogner (*Boston Med. and Surg. Journal*, June 27, 1895) used intravenous injections of sublimate in a severe case of syphilis and experienced neither bad effects nor any therapeutical result whatever.

It may be well to remember that Ullmann very promptly caused death in the lower animals when, in a series of experiments, he injected the bichloride into their veins.

Acting on the assumption that syphilis is a bacterial disease, and that its virus animatum and its poisons may be neutralized or destroyed by the serum of animals which are known to be immune to the infection, or by the serum of syphilized individuals, an antitoxin-serum treatment has sprung into vogue. The basis of this treatment is well expressed in Klein's statement which reads: "When an animal has passed through one attack of a given infectious disease—that is, when an animal has served as a host for the growth and multiplication of a particular pathogenic bacterium—it is found that its blood has acquired a peculiar faculty. The blood has become capable not only of inhibiting the further growth of the bacterium, but also of neutralizing the toxins produced by the bacterium. Animals, therefore, which have acquired immunity possess in their blood a something that they had not before, and this substance belongs to a group of substances called antitoxins." The net results of the injection of the serum of animals as practiced by Tommasoli, Sartori, and Kollman have no scientific value whatever, and the procedure seems to have been abandoned. On the other hand, the method practiced by Bonaduce, Pellizzari, Fournier, and Feulard, who used the serum of a patient suffering from hereditary and acquired syphilis, is being much tried.

Cotterell (*British Jour. of Dermatology*, November, 1895) has treated eighteen cases by the use of hypodermic injections of serum of syphilitic individuals. He found that the serum of persons affected with secondary syphilis was more active than that of those in the tertiary stage. The gross results obtained were rapidity and efficiency of action and the improvement of the patient's health. This author, however, admits that the number of cases was too small and the time of observation too short to warrant him in drawing definite conclusions.

Vievorovsky (*Medical Week*, October 4, 1895) treated five patients suffering from secondary syphilis, by hypodermic injections of the blood-serum of robust subjects having tertiary gummata. The number of injections in each case was from 21 to 23. It is said that chancres were promptly healed; that early rashes and mucous lesions disappeared, but that relapses occurred in spite of the treatment. It is further to be noted that the relapses were much more refractory to the injections than the early rashes were, and that mucous patches were particularly rebellious to this method.

One is scarcely prepared to think that this syphilitic serum-injection treatment would be used as a prophylactic against syphilis, yet Rochon comes cheerily forward and gives his experience in this direction. This author (*Médicine moderne*, May 22, 1895) reports the case of a man who had coitus with a woman who had active syphilitic lesions on the labia majora and minora. Three days after this assumed infecting intercourse hypodermic injections of serum from the blood of syphilitics was begun. In the first three injections the serum was derived from a person who had contracted the disease nine years previously; then followed three injections derived from the blood of a person syphilitic five years, and two from a person in the eighteenth month of the infection. Rochon rather hesitatingly ventures the opinion that perhaps this vaccination did have a prophylactic effect. The man experimented upon is said to have escaped unscathed.

It is well to remember that no scientific value can be placed upon the facts presented by a few haphazard cases observed for only a short time. The tendency of very many who try new remedies and new methods of treatment in syphilis and in other morbid conditions is to rush heedlessly into print with reports of cases which should be observed for years, instead of months. In syphilis the mere dissipation of certain rashes or the disappearance of certain symptoms in reality amounts to very little in estimating therapeutic effects. To judge correctly of the efficacy of a drug or a mode of treatment we need records of at least fifty treated cases carefully watched during no less a period of time than three or four years.

ROBERT W. TAYLOR, M.D.

## ECHOES AND NEWS.

IT is very fitting that Sir Joseph Lister should act as chairman of the British section of the international memorial to Pasteur.

DR. GEORGE H. ROHÉ, secretary and treasurer of the Rush Monument Committee, reported on March 31, 1896, $3729.39 as his total receipts to that date.

DURING the excitement of a recent fire that destroyed a large hospital at Lille, several patients died of shock before they could be removed. But the fatality did not cease at this, for ten sappers, who were removing medicines from the drug department, indulged in drinking what they took to be liquor, in consequence of which four died in spite of prompt attention.

GOVERNOR MORTON has signed the bill making appropriation of seventy-five thousand dollars for the Craig Colony of Epileptics.

THE New York Health Board has instructed Dr. Charles S. Benedict, Chief of the Bureau of Contagious Diseases, to find out where the milk comes from which every child who is taken with a contagious disease has been drinking.

FOOTBALL accidents in England are strongly in evidence during the last two weeks of March. Three players suffered fractures of the larger bones, while a fourth received a probably fatal injury to his neck, followed immediately by paralysis.

IN the current number of the *British Medical Journal* a case of severe opium poisoning, treated with strychnia and permanganate of potassium, is reported by B. W. Gowring, M.R.C.S. His success seems to have been properly accorded to the potash.

THE bill to repeal all quarantine acts in the United Kingdom was introduced by Mr. Russell, member of Parliament, on March 23, 1896.

IN Cleveland, Tenn., two leading physicians died of blood poisoning within a week. It is not stated just how they became infected, but it is presumed that it occurred during their professional work.

BELLEVUE HOSPITAL MEDICAL COLLEGE graduated a class of ninety-seven last month. The successful candidates for appointment in the Bellevue Hospital were: 1. Raleigh William Baird, Texas; 2. Allie Walter Williams, Georgia; 3. William A. Chisholm, Nova Scotia; 4. Charles Blount Slade, Georgia.

MUCH relief will be afforded the most densely crowded tenement district of New York City by the establishment of the proposed parks. Some conception of the overcrowding in these regions can be formed when it is stated that one block contains 1650 inhabitants.

THE bill before the Legislature at Albany to establish for pay-patients a diphtheria and scarlet fever hospital, near East River in New York City, passed the Senate on April 2d.

DR. PENDERGAST, health officer of Cincinnati, states that his investigation has shown that the pipe used for beer pumping in saloons generates a dangerous poison.

CONTRARY to what was announced in the early experience with the X-ray, two Paris experimentors have succeeded in obtaining the skiagraph of a letter through the envelope enclosing it.

AN English photographer who sent out a picture of a foot showing an imbedded needle, received a telegram

from a customer saying: "Photograms received, very tame. Send more sensational ones, such as interior of belly, backbone, brains, liver, kidneys, heart, lungs, etc."

A NEW ambulance for Bellevue Hospital was put into use yesterday. It is known as No. 6, and is said to be the finest ambulance ever constructed in this country. It stands about a foot higher than any of the other ambulances, and weighs only 1300 pounds. The wheels of the vehicle are equipped with solid rubber tires two inches thick.

A BROKEN needle embedded in the fleshy part of a woman's hand was drawn out by a powerful electro-magnet, improvised at the electric light works in Cherryfield, Me., the other day.

A CREMATORY is being erected at Liverpool, making the third in England. The others are at Manchester and at Woking; there is also one at Glasgow. Woking had 150 cremations in 1895, making its total number 733.

UNDER a recent order of the Postmaster-General, relating to periodicals, back numbers and reprints of newspapers, magazines, and all other periodicals, cannot be mailed as periodicals, but must pay postage as books. The publishers say that this order will cause much inconvenience.

IN the French departments, where forests have been cut down, there has been a marked decrease in the number of births, and an increase in that of deaths during thirty years. In the last five years the excess of deaths over births was 89,682, and the mortality in the departments was nine times as great as in the rest of France.

THE medical officers of New York State militia are dissatisfied with the present insignia, which is a shield of embroidered gold. This, it is claimed, is a designation entirely out of place for the Medical Department and practically represents nothing. The insignia that is desired is the Geneva cross, which is known throughout the world, and at once makes known the presence of the medical officer. Surgeon-general Terry has the matter under advisement.

REMARKABLE courage was displayed by Mary Farrel, the laundress whose arm was amputated at Bellevue Hospital Sunday. The young woman while at work in a hotel laundry had her left hand caught in a large steam wringer. The hand and wrist were terribly crushed. The doctors decided on an immediate amputation below the elbow joint. The patient positively declined any anesthetic, and the operation was done without it, the patient proving an interested spectator of the procedure.

A MAN giving his name as Santanelli arrived in Fort Wayne, Ind., recently and gave some private exhibitions of hypnotism. On Monday night, March 30th, he placed James Mahoney, a youth, under hypnotic influence. Since that time Mahoney has been in a comatose state, closely watched day and night by a committee of medical students. This action of Santanelli has caused indignation among the physicians who assert Mahoney will suffer serious injury as a result. Santanelli has been arrested on the charge of cruelty to a minor. This is the first case of this kind ever tried in court.

A SOCIETY has been organized in New York, under the name of the Improved Housing Council, for the purpose of providing suitable dwellings for the tenement-house population. Specifications have been given and the architects of the city invited to submit plans for a suitable type of building adapted to the conditions which prevail in New York. The plan embraces a group of houses, six stories high, designed for an entire city block, and realizes the most recent and approved ideas for light, air, privacy, safety, and comfort.

HENRY J. JORDAN, thirty-nine years old, of 78 West Eighty-fifth street, has been indicted by the grand jury for practising medicine without a license at 21 West Nineteenth street. It is alleged that he has been practising under a diploma of the Philadelphia Medical College that was held by Henry J. Jordan, now dead. The diploma was granted in 1867, which date, it is alleged, has been altered to 1879. The County Medical Society has charge of the prosecution.

THE following is quoted from the recent Goulstonian lectures on "The Life History of the Malaria Germ Outside the Human Body," by Dr. Manson of England: "If it is established, as I believe that ere long it will be, that the plasmodium is a parasite of the mosquito, that malaria is a disease of insects, we may look for some strange scientific and practical developments. The discovery will spread before us a vast field for future study. The real science of malaria will only be begun."

A CASE of death from the use of antitoxin is reported from Wheelersburg, O. On the 22d of March a practitioner, who has had considerable experience in the use of serum, injected the usual prophylactic dose over the scapula of a sleeping child of five years. An hour before he was known to be in perfect health. In less than five minutes the doctor was summoned from an adjoining room to find the child dead.

THE town council of Alameda, Cal., has taken the initiative in advanced ideas of caring for tuberculous patients. An ordinance requires that all persons ill with consumption shall be reported by their physicians to the Board of Health, when directions will be given for their isolation and proper care. Another evidence of the growing appreciation of the contagiousness of phthisis is shown by the steps recently taken in Chicago for the erection of separate buildings in connection with the county hospitals of Chicago for the use of consumptives. Such a hospital has just been opened in Ireland.

WHAT appears to have been the final hearing of Judiciary Committee of the Massachusetts Legislature upon the antivivisection bill was had last week. Witnesses and certificates from nearly all those teaching physiology in the State were arrayed in opposition to the measure.

President Eliot, of Harvard College, strongly protested, declaring that there was no abuse of vivisection in Massachusetts.

A NUMBER of the prominent physicians of Chicago have recently allowed themselves to be interviewed by a representative of the daily press concerning their views upon cremation as compared with ordinary burial of the dead. For sanitary reasons they were unanimously in favor of fire, and expressions of strong opposition on any grounds were wanting. The writer develops the fact that a greater number of acres within the limits of Chicago were devoted to cemeteries than to parks.

THE hypodermatic use of perfume is said to be a popular fad among the Parisian votaries of fashion. The injection of a small amount of violet extract imparts quite a lasting and delicate fragrance to the skin, obviating the inelegance of such applications to the linen.

CONSIDERABLE interest is being manifested in measures now pending in Congress relative to the hospital corps of the army and the marine hospital service of the navy. The objects aimed at by the bills are to change the official title of apothecary in the navy to pharmacist, to raise his rank to that of a warrant officer and to increase his pay. In the army the bills provide for a change of title from hospital steward to pharmacist, to promote the rank from that of first sergeant to sergeant-major and to increase the pay from $45 to $75 a month.

THE following is a list of the medical societies and associations that hold meetings between the 10th and 30th of the present month: Medical Association State of Alabama, at Montgomery, April 21–24th; Arkansas Medical Society, Fort Smith, April 29th; Medical Society State of California, Los Angeles, April 21st; Medical Association of Georgia, Augusta, April 15th; Iowa State Medical Society, Des Moines, April 15th; Medical and Chirurgical Faculty of Maryland, Baltimore, April 28th; Mississippi State Medical Association, Vicksburg, April 15th; South Carolina Medical Association, Spartanburgh, April 22d; Tennessee State Medical Society, Chattanooga, April 14th; Texas State Medical Association, Fort Worth, April 28th.

A WELL-DRESSED young man, who represented himself as a health inspector, called at a bakery at 783 Third avenue, Brooklyn, on Monday evening and induced the young woman, who was in charge, to accompany him to the sidewalk on the pretense of looking at some defect in the gutter. Simultaneously, another young man, the confederate of the "inspector," entered the store and rifled the money-drawer, containing $10.

ANTI-VACCINATIONISTS in this country may well ponder on the experience through which the citizens of Gloucester, England, are now going. For years that city has been a centre of the anti-vaccination craze, and so prevalent there was this particular form of idiocy, that the law in regard to the employment of this safest and most certain of all the prophylactics known to medical science, has long been a dead letter. A whole generation of helpless children was allowed to grow up unguarded, and every school became simply an invitation to pestilence. Now the invitation has been accepted, and such an epidemic of smallpox is raging at Gloucester as has been rarely equaled in modern times, except among the savage tribes of Africa or Greenland. The hospitals are crowded to overflowing, business is at a complete standstill, churches and schools are closed, and toward the cemeteries moves an almost continuous procession of wagons laden with the dead.

DR. ROGER S. TRACEY, register of vital statistics, reports that for the week ended at noon, April 4th, there were 922 deaths in New York City, of which 352 were in cases of children under five years of age.

SOME very observant person has discovered a new affection of the eyes, caused, it is said, by the prevailing method of seating passengers in street cars. The effort to fix the gaze upon passing objects results in a strain and twitching in the external muscles of the globes, which is quite annoying.

## CORRESPONDENCE.

### ACUTE POISONING FROM COTTON-ROOT BARK.

*Editor of* THE MEDICAL NEWS:

*Dear Sir:* The following case may be worth reporting as I am unable to find anything similar to it: Was called very hastily about 11.20 P.M. one Saturday in June, 1895, by Mr. R., a merchant, who stated that he had found his wife unconscious when he arrived at home from the store a few minutes before.

I soon reached the patient and found her in a state of complete muscular relaxation. The pupils were alike both widely dilated; respiration 10, sighing and shallow; pulse 150, very weak and compressible; temperature 95° in axilla.

There was a faint, peculiar odor to the breath, but no blisters on the lips or tongue, though the latter was very dark colored. I asked the husband if she was pregnant. He replied that she thought she was, but he did not. He assured me, however, "that she had not taken anything for that, because he knew she wouldn't do such a thing."

Gave apomorphia, ¼ gr., hypodermically, and diluted alcohol by the same method. Thorough emesis occurred in five minutes, the vomited matter being reddish-brown in color. The symptoms showed rapid improvement, and in half an hour she could swallow, when the stomach was thoroughly washed out, getting rid of some more reddish-brown material, which appeared like extract of cotton-root bark. In about two hours she was able to talk and stated that she took four ounces of fl. ext. cotton-root bark during the interval from 9 to 10 P.M.

She improved rapidly and the next morning was able to sit up. No further trouble occurred except that she was quite weak for a few days.

The amusing thing about it all is that she was not pregnant.

GEO. A. BLAKELEY, M.D.

ALBANY, WIS.

# SOCIETY PROCEEDINGS.

## THE LOUISVILLE CLINICAL SOCIETY.

*Meeting, February 26, 1895.*

DR. LOUIS FRANK presented pathological specimens with the following description: The first specimens which I present for your inspection are two ovaries, which are the seat of primary carcinoma, as shown by microscopical examination. The history of the case briefly is as follows: The patient was a woman, forty-nine years of age, who was first seen about Christmas last for some pain in the abdomen which was diagnosed floating kidney. She was under treatment for a while, later passing out of the hands of that physician. A few days before I saw her she was seen by Dr. Carl Weidner, who diagnosed some uterine or ovarian trouble.

I made a diagnosis of papilloma of one ovary. The entire pelvis was filled with a mass, the uterus being pushed anteriorly and downward against the pubic bone. It was very small in size. There was ascites, and the woman was markedly anemic, having lost in the previous six months forty pounds in weight. The case was deemed of a malignant character, and she was advised to have an operation performed, to which she consented, being operated upon one week afterward at the St. Joseph Infirmary, when these two specimens were removed. When first removed they were about twice the size they now present, there being a number of cysts throughout each specimen. The cyst enveloping one ovary has not been opened, but it contains a gelatinous or colloid material. Connected with this ovary there was a very large cyst, which extended high up in the abdomen, almost to the umbilicus. The soft wall of the larger cyst was ruptured in attempting to remove it. There were no adhesions whatsoever. At the time of the operation it was discovered that metastases had occurred, although none of the cysts had then ruptured. Several of the mesenteric glands were involved, and there were one or two spots on the intestines themselves. Before the operation we had thought there were no metastases, and for that reason had advised the operation; in fact, we did not think that it was a case of carcinoma previous to the operation, as the microscope has since shown. Of course, where metastases have taken place, results of operation are not at all favorable, recurrence taking place usually very rapidly.

This patient did exceedingly well for five days, when she became very apathetic, and finally lapsed into a sleep from which it was very difficult to rouse her. The urine had been examined twice by Dr. Weidner, previous to the operation, who found neither albumen, casts, sugar, nor any abnormal condition. At the time the alarming symptoms developed, five days after the operation, the nurse was requested to secure a specimen of the urine for examination, but by repeated catheterization none was found. The patient died forty-eight hours after the first symptoms set in without having secreted any urine; having all the indications of severe uremia. Chloroform was used as the anesthetic. There never was a symptom of sepsis, and what occasioned the uremia, unless there was some pre-existing disease of the kidneys, which was not discovered, I am at a loss to say.

The other specimen is from a case of experimental surgery, which we have been doing at the college, being a case of resection of the intestine in a dog. Silk was used, the sutures being put in from the outside in a double row. The dog recovered very nicely and lived eight weeks after the operation, when he died of obstruction. At the autopsy adhesions of the omentum were found throughout at the point of resection, and that part of the gut which was turned in still remains, having formed a valve through which it was almost impossible, with a great deal of pressure—I should say ten pounds—to force any water whatsoever, except a drop at a time. The piece of gut, after being taken out, was stretched over a faucet at the hydrant, and not a drop of water could be forced through the obstruction by the pressure behind it. Allowing the water to remain in for some time, and by stripping downward with the finger, a few drops would gradually trickle through, so there is no doubt about the obstruction being practically complete. What symptoms were produced before the death of the dog I am unable to say. The sutures are still *in situ*, and that part of the gut turned in has not disappeared.

### DISCUSSION.

DR. AUGUST SCHACHNER: In this connection I would like to say something which has come to my notice to-day in regard to Maunsell's method of performing an intestinal resection, and which possibly might be the source of serious trouble. As we all know, in Maunsell's method of resection, the sutures take a particularly large purchase on the two divided ends of the intestine, a purchase of about one-quarter of an inch, going through all the coats of the intestine. I had occasion recently to kill a dog upon which I had performed the Maunsell's operation and found that all of these sutures were present in the form of little loops. The sutures had such a strong grasp upon the intestinal walls, that they had never sloughed away, presenting simply a row of loops, I suppose fully large enough to admit the end of a lead pencil. Now it is possible that such a row of loops, hanging into the intestine, might cause the arrest of some of the intestinal contents, and might be the starting-point for an intestinal obstruction. I do not know whether this has ever been mentioned, but I was impressed with the fact that obstruction might be brought about by such a condition after this method of resection. The dog was killed 2½ weeks after the operation. Perfect recovery had taken place, and in the meantime another resection by a different method had been performed on the same animal.

DR. CARL WEIDNER: Referring to the first case reported by Dr. Frank, there was no reason for the woman's sudden death, rather I might say for her premature death, except uremia; and the next question is, why should uremia occur? I had examined the urine of this patient before the operation, finding neither albumen, casts, nor any indication of organic kidney lesion. She did well after the operation, there being no indication of sepsis, but she died on the seventh day, symptoms of suppression of the urine having set in, and no urine was secreted for

thirty-six hours before death. There must be some severe shock which takes place in a debilitated patient, making a deep impression upon the nervous mechanism, which results in the arrest of urine. Possibly this may occur in the same manner, as we have sudden arrest of the secretion of a gland, from some shock to the nervous system. We might compare it to the effect of fright upon the digestive functions.

DR. W. C. DUGAN: I remember having seen a case in the City Hospital very much like the one reported by Dr. Frank. The patient came under the observation of Dr. Boggess in the medical ward, and he called me in to see her. The case had been under the care of his predecessor. She had been tapped two or three times for what was supposed to be simple ascites. Dr. Boggess examined the patient and found she had a nodular growth in the *cul-de-sac*, and it was on this account that I was consulted. We found a considerable accumulation of fluid in the cavity, also detected what we took to be several tumors in the pouch of Douglas, extending above the symphysis. It was decided to do an exploratory operation, but we were undecided as to just the nature of the trouble. There were indications of malignancy, rapid loss of flesh, and a general toxic condition. An incision was made and a large quantity of fluid was at once evacuated. We found the left ovary in a condition similar to the specimen exhibited by Dr. Frank, except that the tumor was very much larger. The tapping of the ovarian cyst and the leakage subsequently had allowed the papillomatous growths to become disseminated all over the intestines; I do not think that I ever saw another such condition. You could hardly put your finger down upon the intestine, but you would find several growths varying in size from a millet seed to a robin's egg. At the point where the trocar had been passed through, the omentum had become attached to the abdominal wall, and for a space of several inches there were large deposits all over the viscera. This patient went on very much as the case reported by Dr. Frank, and died without any septic condition, and the only explanation we could suggest was that she simply died from the intense poison from the carcinomatous tissue.

DR. W. H. WATHEN: I was present at the operation reported by Dr. Frank, and when the woman was returned to her room I expressed the belief that she would make an uninterrupted recovery. I am not surprised that Dr. Frank should have stated that there was no sepsis, because I hardly see how there could have been any. The symptoms must have been due to the character of growth that was removed. Cases of carcinoma of the ovaries do not endure operative interference well, and I presume the patient never entirely rallied from the shock of the operation; the kidneys finally ceasing to secrete urine, she died.

DR. LOUIS FRANK: I agree with Dr. Dugan that rupture of these papillomatous and cancerous tumors do cause metastases; papillomatous tumors that rupture very often take on, even after rupture, carcinomatous degeneration, as they do also sometimes before rupture. It is very difficult, and sometimes quite impossible, to tell, macroscopically or microscopically, papillomatous from true carcinomatous tissue, and it is absolutely impossible to determine by either way the point where they merge into one another, or, at times, even clinically. Papillomatous tumors are at times cancerous in character, and, so far as the life of the patient is concerned, they may be regarded almost always as malignant.

As to the justifiability of the operation, I believe that unless there are metastases, or that the patient is in such a weakened state from cachexia or cancerous poisoning, these operations are justifiable; and in looking up the subject I find that Sir Spencer Wells, Lawson Tait, and, others say that they are justifiable. Those who say they are not justifiable seem to be in the minority, though among them are such names as Schröder, who is now dead, and other equally eminent authorities. The French authority, Pozzi, also thinks that the operation is perfectly justifiable, and all authorities, with few exceptions, agree that exploratory incision should be done in all cases, as relief of the ascites alone gives the patient material comfort and lessens the pain present.

DR. W. H. WATHEN: I believe the question of secondary infection of the peritoneum was suggested by the remarks of Dr. Dugan. We found in Lawson Tait's work this subject discussed thoroughly, and he mentions a case where he opened the abdomen and removed a very simple insignificant-looking intra-ligamentous cyst, the patient made a speedy recovery, but died within three months from diffuse malignant disease of the abdominal viscera. We never know from the physical appearance of one of these tumors, or from the physical characteristics of the liquid contained within a cyst of this character, whether the disease is then malignant, or whether it will finally develop a malignant form of trouble. You cannot diagnose a case such as Dr. Frank has reported, or say whether it is malignant or benign until you have opened the abdomen and come in contact with the diseased structures; and you cannot then always make a diagnosis, in fact, very often you cannot. There are some of these papillomatous tumors where the papillomata may be within the cavity of the cyst; where they may have filled the cavity of the cyst penetrating its walls; or where papillomata may have developed upon an ovary that looks macroscopically to be positively malignant, but we find that many of them are not malignant because the patients recover from the operation and remain permanently well.

A little over three years ago a lady from the interior of this State consulted me, having at least four gallons of ascitic fluid in her abdomen, and with a tumor larger than one's fist upon each side. She was very much emaciated, and did not weigh over eighty pounds when the liquid was removed. She was so very feeble that it did not seem possible she would withstand an operation. She recovered from the operation and returned home within a little over two weeks, became fleshy, and has had no trouble since. I removed two of the most typical papillomatous ovaries that I have ever seen, and expected that there would be a return of the trouble within a very short time. We sometimes operate and remove papillomata or cysts arising in the ovary, and find during the operation that the peri-

toneum covering the bowels, and probably the mesentery, the omentum, and the abdominal walls, are studded with papillomata, and we expect the patient to die, but she recovers and the papillomata all disappear.

Therefore, I say that these operations are justifiable, if the patient is in such condition as to withstand surgical treatment, because we cannot tell whether the disease is malignant or not. If it is malignant and we can remove all the diseased structures, I then claim that operation is still justifiable.

## REVIEWS.

A Manual of Physiology, with Practical Exercises. By G. N. Stewart, M.A., D.S.C., M.D., D.P.H., Professor of Physiology Western Reserve University. Published by Baillière, Tindall, & Cox, London. Sold by the Cleveland Medical Publishing Co., Cleveland, O.

By a combination of systematic exposition and specific directions for coincident practical work, this manual is designed to meet the needs of modern methods in teaching physiology. Actual contact with the facts not only develops ability to manipulate and observe, but is essential to the acquisition of an adequate knowledge of the science. The author recognizes this, and the great advantage to the student of corresponding didactic instruction and practical work throughout the course. The book is arranged to accomplish this by a section of "Practical Exercises" after the systematic description of each of the various subdivisions. The exposition of the subject is specially clear and concise, and takes cognizance of the results of the most recent researches in the domain of physiology. The value of the comparative method in investigation and study is well emphasized. As the manual is adapted to the use of students in medicine, this feature of the work is of much importance in view of the fact that many of these students lack the preliminary training in biological science which serves to acquaint one with the far-reaching relationships of morphology and physiology, and with the fact that the structures and functions of the human body are but parts of a great plan. The book is well illustrated, many of the cuts being new. The "Practical Exercises" are frequently accompanied by sketches of the animal with the apparatus arranged for experimentation, and these drawings will prove helpful. Such a manual as Dr. Stewart's admits of variation in the arrangement of topics and of elaboration in laboratory procedures if desired, and it will prove a valuable help to teachers and students, both as a text-book and as a guide in laboratory study.

System of Surgery. Edited by Frederic S. Dennis, M.D., Professor, Principles and Practice of Surgery, Bellevue Hospital Medical College; Assisted by John S. Billings, M.D., LL.D. Edin. and Harv., D.C.L. Oxon., Deputy Surgeon-General U. S. A. Vol. III. Philadelphia: Lea Brothers & Co., 1895. Pp. 919.

This volume maintains the reputation established by the preceding volumes, both as to the ability of the authors, and the practical character of its papers. The subjects embraced in this volume relate to the surgery of the regions of the mouth, larynx, and trachea, neck, chest, eye and ear, skin, genito-urinary system, and to syphilis. The number of authors is twelve, and among them we recognize many of the leading writers of this country. All of the authors are American surgeons.

The surgery of the larynx and trachea is treated by Professor Delavan, of New York. Some features of the diseases discussed, of much practical interest, are too cursorily considered. The proper operative procedure in peritonsillar abscess may involve external incision, and the exact limits should be defined. The approach to the abscess by a blunt instrument, as a director, is of the first importance. A quite similar operation is required in some cases of deep and diffuse retro-pharyngeal abscess, but the author only alludes to it, without noticing the precautions necessary to success. There is also no allusion to those troublesome cases of "recurrent tonsilitis," now so successfully treated by the method of Leland of Boston, with a hooked knife with which he tears away the partitions between the crypts. Professor Mudd of St. Louis, treats of the diseases of the mouth and tongue; Professor Porter of Harvard University, of the diseases of the salivary glands; and Dr. Willard Parker of New York, of the surgery of the neck. Professor Dennis discusses the surgical injuries and diseases of the chest, and introduces, at the close of his paper, Bryant's method of relieving esophageal and bronchial obstruction by way of the posterior mediastinum, with illustrations. The diseases of the eye are treated by Professor De Schweinitz of Philadelphia, and the operative surgery of the eye by Professor Noyes of New York. Dr. Gorham Bacon of New York, furnishes an article on the surgery of the ear, in which he discusses mastoid disease in a very practical manner. The surgical diseases of the jaws and teeth are treated by Professor Tiffany of Baltimore, and the surgical diseases of the skin by Professor Hardaway of St. Louis. The surgery of the genito-urinary system is exhaustively treated by Professor White of Philadelphia, assisted by Dr. Wm. H. Furniss. This article occupies 331 pages, and is in itself a very complete treatise on that subject. Professor White discusses the question of castration for hypertrophy of the prostate approvingly. The last one hundred pages are devoted to the subject of syphilis, by Professor Taylor of New York. His name is a guarantee of the high character of the article.

A Pictorial Atlas of Skin Diseases and Syphilitic Affections, from models in the Museum of the Saint Louis Hospital, Paris, with explanatory woodcuts and text, by Ernest Besnier, A. Fournier, Tenneson, Hallopeau, Du Castel, Henri Feulard, and Léon Jacquet. Edited and annoted by J. J. Pringle. Published by F. J. Rebman, London; W. B. Saunders, Philadelphia. In twelve parts.

An examination of Parts I and II of this recent addition to pictorial dermatology, excites a feeling of mingled admiration and astonishment. One cannot help admiring the artistic excellence of these plates and noting their life-

like appearance, which seems more striking, when it is remembered that they are not taken from life, but from wax models of dermatological cases, mostly executed by M. Baretta, for the Museum of the Saint Louis Hospital in Paris. This famous collection is well known to most dermatologists in America, and it is a source of congratulation that many of the typical representations of common skin diseases, which heretofore could only be studied upon the shelves of the museum, are now brought to the notice of the profession in this country by means of this new and excellent atlas.

In Part I are four photo-lithochromes, representing lupus vulgaris, dermatitis herpetiformis, syphilitic chancre of the vulva, and purpura hemorrhagica.

In Part II, we find representations of lupus erythematosus, hypertrophic rosacea, circinate papulo-squamous syphilide, and Xanthoma planum et tuberosum.

When all of the plates are so worthy of commendation, it seems unjust to discriminate, but the illustrations of erythematous lupus and the circinate syphilide are remarkably fine, and perhaps deserve special mention. The text accompanying the plates furnished by the various authors, is concise and practical, and gives, in addition to a brief history of the case, a commentary on both the case in particular and the disease in general, which will prove of interest and value to the reader. A number of woodcuts are scattered through the text and serve to emphasize or elucidate points of differential diagnosis and other matters to which reference is made.

THERAPEUTICS OF INFANCY AND CHILDHOOD. By A. JACOBI, M.D., Clinical Professor of the Diseases of Children in the College of Physicians and Surgeons (Columbia University), New York, etc. Philadelphia: J. B. Lippincott Company. 1896. Pp. 518.

To the readers of the *Archives of Pediatrics* of the past dozen years, much of the material in this book will have a familiar, but not unwelcome appearance, for it has been compiled by the distinguished author from contributions to many numbers of that journal, additions and corrections being made, of course, where indicated.

A work like this, the product of a mature mind, rich in the experience of the subject at issue, is a distinct gain to medical literature. It has long been a matter of surprise that one so well qualified to instruct the general profession, has delayed so long to present his views in comprehensive form. Perhaps it can best be explained by the great activity of the author's life, and the consequent inability to devote the time necessary for such a service. Of course, the profession is the gainer by the delay in the maturity and breadth of treatment of the subject.

Dr. Jacobi is a believer in drugs, we are therefore prepared to learn that his understanding of therapeutics is no mere generalization of statements, no exposition of his broad knowledge of hygiene and dietetics alone, but a comprehensive application to the treatment of disease in children of methods of diet and hygiene when these are indicated, or, of the use of the great variety of materials which are to be found in the pharmacopœia, if such would seem to him more appropriate. One will look in vain in his pages for the highly advertised proprietary remedies. Such a plan may be carried too far, for while overadvertised or loudly advertised remedies certainly tend to make one suspicious as to their real merit, it does not follow that they are necessarily without value, and one should be allowed to chose from among them those which have merit, which can be positively determined, even though the methods by which they are distributed may be objectionable.

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## OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM FEBRUARY 25, 1896, TO MARCH 30, 1896.

Leave of absence for two months and fifteen days, with permission to go beyond sea, is granted Captain Charles F. Mason, assistant surgeon U. S. Military Academy, West Point, N. Y.

The leave of absence for seven days granted Major Joseph K. Corson, surgeon U. S. Army, Fort D. A. Russell, Wyoming, is extended twenty-three days.

First Lieutenant William F. Lippitt, Jr., assistant surgeon, will report in person to Major Henry S. Turrill, surgeon, president of the examining board appointed to meet at Fort Riley, Kan., on Tuesday, April 14, 1896, at 10 o'clock A.M., at such time as he may be required by the board for examination as to his fitness for promotion.

Leave of absence for two months, with permission to apply for an extention of two months, is granted Major Curtis E. Price, surgeon, Fort Sill, Ind. Ter.

First Lieutenant Henry C. Fisher, assistant surgeon, is relieved from duty at Fort Yates, N. Dak., and ordered to Plattsburgh Barracks, N. Y., for duty.

The following-named officers will report in person to Lieutenant-Colonel Charles R. Greenleaf, deputy surgeon general, president of the examining board, appointed to meet at San Francisco, Cal., on Tuesday, April 14, 1896, at 10 o'clock, for examination as to fitness for promotion: First Lieutenant Merritte W. Ireland, assistant surgeon; First Lieutenant Benjamin Brooke, assistant surgeon; First Lieutenant George M. Wells, assistant surgeon.

## OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY, FOR THE WEEK ENDING, MARCH 26, 1896.

March 10.—Medical Inspector J. B. PARKER to duty in charge of Naval Hospital, Widow's Island, Me., in addition to present duties.

March 11.—Surgeon THOMAS OWENS placed on the retired list March 10.

March 13.—Surgeon W. R. DUBOSE detached from the Naval Academy and ordered to the "Terror."

March 16.—Surgeon P. M. RIXEY ordered to the Naval Dispensary, Washington.

Assistant Surgeon H. LA MOTTE detached from the Naval Hospital, Chelsea, Mass., and ordered to the receiving ship "Franklin."

Surgeon G. E. H. HARMON detached from the Naval Dispensary, Washington, and ordered to the Naval Academy.

P. A. Surgeon C. H. T. LOWNDES ordered to the Washington Navy Yard.

March 23.—Passed Assistant Surgeon B. R. WARD detached from Coast Survey Steamer "Blake" and ordered to the "San Francisco," holding survey on Chaplain J. J. KANE in London, en route.

March 27.—Surgeon J. C. WISE ordered to examination for promotion March 27.